

## Public Comments Received on SSL Protection Measures Draft SEIS

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<sup>1</sup> Form letters are not all being reproduced. We received 1,027 versions of this form letter during the comment period and an additional 84 since the comment period closed October 15, 2001.



⊕ I'm 76 from Seattle + Mom 9/9/2001 Alaska!  
I fished all my life there in SSL EIS  
Dear Sirs - Miss at

The idea that one would sacrifice food fish for the sake of Steller Sea Lions is absurd.

The Sea Lions ruined a multi million dollar Steehead Sport + fishing industry that hunters + fishermen by the way paid for in Seattle, ruined the Herring schools in San Francisco + crapped on the dock etc there causing filth + disease and then left to find fish else where.

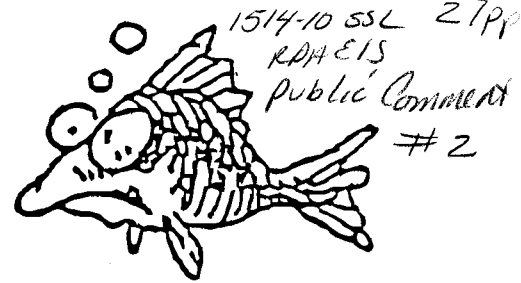
They are powerful Animals and will find fish to feed on by themselves you don't have to worry about them. most people feel there are still too many Sea Lions, cut down their numbers and you won't have to worry about taking food out of people's mouths for them. I say No respectfully William Webster ⊕

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SEP 12 AM 8:11

**North  
Pacific  
Longline  
Association**

9-18-01



Records Management Office  
National Marine Fisheries Service  
Alaska Region  
P.O. Box 21668  
Juneau, Alaska 99802  
Attn: Lori Gravel

September 18, 2001

SSL EIS  
G0002

**RE: Comments on Draft Seis for Steller Sea Lion Protection Measures, August 2001**

The North Pacific Longline Association represents freezer-longliners that fish for cod and other species off Alaska, processing and freezing their product at sea. The August 2001 BiOp (BiOp4) is a great improvement over BiOp3, and makes a more realistic assessment of the possible causes of sea lion decline. We wish that it had abandoned completely the theory of localized depletion, but it did not.

On page 123 of BiOp4 several exceptions to closures of nearshore waters for fixed gear operators are described, based on the view that fixed gear fisheries are least likely to cause localized depletion. Unfortunately there are several contradictory statements regarding the possibility of causing localized depletion with fixed gear on the page, the last concluding that NMFS has no scientific data to support its view, and is forced to "speculate" on the possible impacts. We beg to differ.

Early in the RPA committee process we supplied detailed weekly catch charts of our FY2000 BSAI cod fishery by statistical area, prepared by Fisheries Information Services of Juneau. These charts demonstrate clearly that our longline fishery is thoroughly dispersed in time and space, minimal in critical habitat, and conducted at low rates of CPUE. Lowell Fritz of the AFSC has produced more detailed charts for several years, demonstrating that it is very unlikely that the longline industry is causing localized depletion (Fritz 2001, unpublished).

Longline fishing causes localized aggregation of fish, not localized depletion. Svein Lokkeborg and Asmund Bjordal of the Institute of Marine Research, Bergen, Norway, have conducted studies indicating that fish are attracted to baited hooks from long distances (at least 700 meters), the struggling of hooked fish attracts more fish to the gear, and the hooking probability of fish attracted to baits is low (most fish drawn to a baited longline are not caught) – see Lokkeborg, personal communication, September 11, 2001, longliners do not cause localized depletion, attached. The prey field in the vicinity of longline gear will be dense so long as bait is available and/or hooked fish are struggling. The Council saw a video of this behavior, made by Lokkeborg and Bjordal, at its September meeting in Sitka. Also attached are three studies by the researchers that support the contentions above.

We request that all of this scientific data be taken into consideration in the final version of BiOp4. Thank you for your attention.

Sincerely,

4209 21st Avenue West, Suite 300, Seattle, Washington 98199  
TEL: 206-282-4639; FAX: 206-282-4684



STATE OF ALASKA

DEPARTMENT OF FISH AND GAME

OFFICE OF THE COMMISSIONER

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September 20, 2001

SSL EIS  
C-0003

Lori Gravel, Records Management Officer  
National Marine Fisheries Service  
P.O. Box 21668  
Juneau, Alaska 99802

Dear Ms. Gravel:

On behalf of the State of Alaska, the Alaska Department of Fish and Game (ADF&G) submits the enclosed comments on the August 20, 2001, biological opinion addressing proposed Steller sea lion protection measures in federal groundfish fisheries. The State appreciates this special opportunity to comment on a draft version of a biological opinion.

Due to the close ties between the State's parallel season groundfish fisheries and the federal groundfish fisheries, the analysis of this biological opinion extends to the parallel season fisheries. Accordingly, the conclusion of "no jeopardy or adverse modification" should extend to the parallel fisheries. Based on interagency discussions, ADF&G understands the Protected Resources Division agrees with that assessment. The final biological opinion and incidental take statement should expressly say that the parallel season fisheries are included within the protection given to the federal fisheries.

The description of other state fisheries, especially salmon and herring, should be revised substantially as set forth in the attached comments. As currently drafted, the biological opinion misrepresents the nature of those fisheries and overstates the realistic potential for those fisheries to have any detrimental effect on sea lions.

We suggest the Protected Resources Division also consider the August 2001 report of the Alaska Steller Sea Lion Restoration Team (ASSLRT) in addition to the attached comments. In that report, the ASSLRT reached conclusions that differ in import ways from the assumptions and analysis in the biological opinion. Most significantly, the ASSLRT recommended that the nutritional stress hypothesis should not be used as a justification for commercial fishing restrictions. ADF&G believes the ASSLRT report provides a sound assessment of sea lion issues. Nonetheless, ADF&G intends to recommend to the Alaska Board of Fisheries that the Board adopt the restrictions necessary to structure the parallel season fisheries in the manner anticipated in this biological opinion.

Thank you for the opportunity to offer the attached comments.

Sincerely,

A handwritten signature in black ink, appearing to read "Frank Rue", with a long horizontal flourish extending to the right.

Frank Rue  
Commissioner

Enclosures

cc: John Sisk  
Kevin C. Duffy  
Earl E. Krygier  
Jon Goltz

September 20, 2001

## ADF&G Comments on the Draft Section 7 Biological Opinion

The new biological opinion is improved in many ways, especially the manner in which it acknowledges scientific uncertainty and incomplete data. Even so, the State of Alaska, Department of Fish and Game provides the following comments, fulfilling the State's role as a cooperating agency on the SEIS and seeking to improve the description and analysis of state fisheries in the biological opinion. We encourage NMFS to consider the final report of the Alaska Steller Sea Lion Restoration Team (ASSLRT) in addition to the following comments.

1. Page 39, lines 6-7 states that human disturbance of sea lions at terrestrial sites is not considered to be a factor in the continued decline. But figure 4.2 on page 70 indicates that disturbance is a possible factor in the decline from 1990 to 2000. This is an apparent inconsistency that should be avoided or explained.
2. Page 45, the table should not list the eastern edge of the central GOA as "Eastern GOA." That term has a specific meaning, which includes the area east of 140 degrees.
3. Page 76, lines 36-39 are not self-explanatory, and yet no explanation is given for the conclusion that "it is unlikely that the natural environmental change has been the sole underlying cause for the decline of Steller sea lions." The biological opinion does not give any explanation for determining that it is either likely or unlikely that environmental change is the sole cause. If it is truly unlikely, the reasons why it is unlikely should be explained. The ASSLRT team did not believe there was a single source that accounted for the historical or recent declines of sea lions. They noted that sources of unknown mortalities should include the cumulative mortality hypothesis in which a number of mortality sources (e.g., illegal shooting, predation by killer whales and sharks, entanglement, incidental fishing mortality, disease, etc.) may fully account for recent population trends.
4. Page 77, the discussion of killer whales should present not only the minimum killer whale population estimate, but the full range with an associated confidence level. This would provide a range of possible population sizes for the transient population that feeds on marine mammals. The conclusion on page 79 could then more accurately include a range of possible impacts and a consideration of how this range of impacts may play in accounting for the decline.
5. Page 82, lines 12-20, Section 4.4.3.1 reports that the federal groundfish fisheries are estimated to directly kill 9 Steller sea lions per year, and the Prince William Sound salmon drift gillnet fishery is estimated to directly kill 15 Steller sea lions per year. The biological opinion does not, however, report the source of that estimate. It appears to have been taken from the Alaska Marine Mammal Stock Assessments published by NMFS. The draft 2001 stock assessment reports a mean annual sea lion mortality in the federal fisheries of 8.4, and a mean annual take in the Prince William Sound salmon drift gillnet fishery of 14.5. Those

numbers are official estimates made by NMFS in compliance with the Marine Mammal Protection Act. The reference in the biological opinion to "another 30" mortalities "expected to be killed each year in interactions with state fisheries" is not helpful in light of the recognition that the estimate is "not reliable." That statement should be deleted, and marine mammal stock estimates of direct mortality should be used unless more reliable information is available.

6. Page 87, lines 20-40, this section discusses the impacts of trawling. These impacts are portrayed later (Pages 90 & 92) as also occurring from other gear types in state waters. This connection between non-trawl gear and trawl-like effects is not justified in the literature.
7. Pages 87-88, the last paragraph of Section 4.4.3.2.2 suggests that all species of Steller sea lion prey are targeted by commercial fisheries. That is not true. Among the top 14 prey of Steller sea lions are squid, octopus, Pacific sand lance, smelt, Irish lord, Pacific sandfish, snailfishes, and rock greenling, none of which are targeted in commercial fisheries. This information, which is not discussed in the biological opinion, tends to weigh against the food competition theory and should be acknowledged in the biological opinion.
8. Page 89, lines 4-16, this paragraph describes critical habitat. Because of the amount of area proposed to be closed we assume the closures are largely in respect to the hypothesis of nutritional stress linked to fishing activity. The ASSLRT considered that protective measures that address two types of sea lion biological activities may aid their recovery. First is a precautionary zone of non-disturbance, from 100's to 1,000's of feet, around haulouts and larger areas around rookeries. A second biological activity for precautionary consideration would be to provide non-competitive forage for age and sex classes at risk. The ASSLRT team believed that information that described where critical life stages actually foraged was important to define foraging zones and decide if no-fishing should occur there. Never-the-less, at today's date a precautionary approach could warrant more restrictive closures as proposed to the Council. In the future, information should become available to delineate where critical life stages of SSL feed. Then if precautionary measures are deemed prudent to impose, they should reflect where the critical SSL life stages actually forage and where fishing operations actually deplete the forage.
9. Page 89, line 24, the paragraph beginning on this line should be deleted. The fact that NMFS has asked the State to apply for an incidental take permit has nothing to do with the environmental baseline. If the permit request has any proper place in the biological opinion, it is in the section addressing conservation recommendations.
10. Page 89, lines 33-42, this paragraph should be revised. It discusses the effects of state fisheries in terms of "takes," which is a term with particular legal significance. The state disagrees with many of the statements and implications set forth in this section, and the biological opinion is not the proper context for asserting and defending against legal positions. The paragraph should be written in a manner that describes "effects" without suggesting legal conclusions about takes. In the alternative, the paragraph should at least explain that not all takes are prohibited by law, and that the State has said it will be working

to expand and improve the analysis of any effects that fisheries may have on sea lions and to modify fisheries or apply for an incidental take permit as necessary.

11. Page 89, lines 33-42, in addition, this paragraph says that state-managed fisheries are estimated to account for about 30 lethal takes per year, but that statement rests on information that is identified elsewhere in the document as unreliable. It also exceeds NMFS' own official estimate of annual Steller sea lion mortality in state fisheries in the draft 2001 Alaska Marine Mammal stock assessment report. This statement should be deleted from this section.
12. Page 89, lines 33-42, the discussion of illegal shooting should also be separated from the rest of this section because it is logically unrelated to authorized state fisheries. The State does not authorize the shooting of sea lions. Also, the number assigned to illegal shooting mortalities is said to be based on speculation. If the number is not known that should be acknowledged rather than resorting to speculation.
13. Page 90, line 18, the use of adjectives describing an "intense pattern of localized removals of dense schools of fish" tends to portray state managed fisheries incorrectly.
14. Page 90, in general, the state is concerned with this section because, with the exception of Kodiak, neither herring fisheries, nor herring stocks, occur in the major "problem" areas of the Steller sea lion decline. (The Dutch Harbor Food and Bait and a small portion of the Togiak herring fishery occur in critical habitat but exploitation rates and fishery duration are extremely conservative.) The biological opinion does not mention this fact, despite the lengthy discussion of herring fisheries. The department provided many maps and figures and text about this to NMFS via Kruse et al. 2000, but this observation has not been included in the biological opinion. Also, parts of this section, especially the last paragraph of the herring section (lines 29-47) appear to be speculation about the effects of herring fisheries on sea lions rather than a scientific analysis.
15. Page 90, line 27 says, "Interactions between Steller sea lions and the herring fishery occur when vessel activity interferes with sea lions foraging." To our knowledge, interference does not occur, and there is no literature concluding otherwise. At most, a speculative statement that vessel interference "might" occur is all that is warranted.
16. Page 90, line 28 says, "and when mortality results from direct takes of sea lions in the fishery." We are not aware of any documented direct take of sea lions in the herring fishery. Undoubtedly there were rifle shots fired in bygone eras, but this statement implies it is still happening. The statements should be supported by a citation or deleted.
17. Page 90, line 42 says, "Human activities that diminish feeding opportunities for sea lions, such as herring fisheries, may have negative consequences." The negative consequences are identified as a mere possibility, but so should be the connection between herring fisheries and diminished feeding opportunities for sea lions. At a minimum, a second qualifier is needed in this sentence that herring fisheries "might" diminish feeding opportunities, in addition to the statement that it "may have" negative consequences.

18. Page 91, lines 9 and 10 imply there is a negative consequence from the fishing activity. Our many years of field experience on the fishing grounds while managing herring fisheries indicates that it is equally likely that sea lions venture into the fishing grounds because the fishery is beneficial, concentrating herring and confusing them and enhancing feeding opportunities. This cannot reasonably be considered to cause harm to sea lions, and could actually be considered beneficial.
19. Page 91, lines 18-27, Hobart Bay is in Southeast Alaska. Since Steller sea lion abundance in that area is at record high levels, one could conclude that our herring management strategies are not impacting sea lions. In the Steller sea lion problem areas of the central and western gulf, other than Kodiak, there are essentially no herring fisheries. The use of Hobart Bay as an example of the association between sea lions and herring fisheries is misleading.
20. Page 91, lines 29 and 30 says "[t]he fishery moves in and harvests entire schools of herring . . ." At herring fishery areas, it is often the case that multiple schools, large and small, are present. While purse seiners have sometimes reported wrapping up whole schools, this only occurs if the school is small. When seiners set on a large school, they get only a very small part of the large school. By far, most of the herring biomass is in these large schools. Since the small schools are in close proximity to larger schools, there is not a significant hole in the available prey field. The largest 5% of the herring schools accounted for 50% of the biomass in the one study that we have where we were able to quantify the size of all the schools (Funk, et al. 1995).<sup>1</sup>
21. Page 91, lines 29-47, the biological opinion provides no support for the statement that the short openings for herring fishing in state waters "may be essential to the survival of animals such as Steller sea lions." The statement is not self-evident, especially in light of the fact that sea lions feed on herring schools both when fishing is permitted, and when no fishing is permitted (which is the vast majority of the time). Moreover, it is difficult to imagine how the few hours in which fishing is permitted could be "essential to the survival" of sea lions when, as the biological opinion reports elsewhere, sea lions do not store energy but need a regular supply of forage to maintain their energy needs. The biological opinion also fails to explain that the State of Alaska has closed many herring fisheries in recent years due to low abundance of herring in many areas.
22. Page 92, line 7, why is the state cod harvest characterized as a percentage (22.5%?) of the federal harvest rather than a percentage of the total harvest? What is there about this metric that is descriptive or meaningful? It doesn't appear to be a proper descriptive metric to us. Our estimate of the percent of the federal harvest is: 0.11% for pollock, and 5.29% for Pacific cod. This is for the combined BSAI and GOA federal groundfish harvests in 2000.

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<sup>1</sup> Funk, F.C., G.A. Borstad, and S.A. Akenhead, 1995. Imaging spectrometer detects and measures the surface area of Pacific herring schools in the Bering Sea. Proceedings of the Third Thematic Conference on Remote Sensing for Marine and Coastal Environments: II-833-844, Professional Paper PP-117, Alaska Department of Fish and Game, Juneau.

23. Page 92, line 8, the state GHL for pollock is not limited to 25% of the ABC for pollock. In Prince William Sound the GHL is based on independent surveys. It is set at 19.5% of the available spawning biomass, which is a minimum estimate because our survey estimate is conservative. In the parallel fisheries, the pollock fishery closes when the federal TAC is attained.
24. Page 92, line 12, why is it stated unequivocally, “State managed groundfish fisheries reduce the abundance or alter the distribution of several Steller sea lion prey species”? Clearly, if you remove one fish, you have reduced abundance. But it is not scientifically creditable to assume that such miniscule removals have any effect on the ability of sea lions to forage. Removal rates in State managed groundfish fisheries are low. If one is trying to make a case for competition, it is not very creditable. This is because low removal rates, coupled with the fact that sea lions feed significantly on prey of a smaller size than targeted by commercial fishers and also prey significantly on non- commercial species, do not limit forage opportunities. Quite simply, we do not believe that a responsibly managed fishery with low harvest rates and fished with gear that does not remove industrial amounts in a single swoop can be considered to impact foraging, particularly when no nutritional link to sea lion health or to fishery removals are presented. Furthermore, there is no characterization of federal fisheries in a similar light, yet these fisheries coincide in time and space at the 3-mile limit.
25. Page 92, lines 13-20, the sentence beginning “The groundfish fisheries can cause dense schools of prey to scatter” is inappropriately placed in the discussion of state fisheries. Large industrial trawl fisheries have been shown to cause temporary displacement of fish within a school up to one hour after the trawl passed through a spawning aggregation. In our Prince William Sound pollock trawl fishery the harvest occurs below the usual feeding depths of sea lions, so if any short-term dispersal occurs, it is not affecting sea lion feeding. The remaining state groundfish fisheries are using attractant gear (pots, jigs and longline). Scientific literature from Norway indicates such gear does not cause fish schools to scatter. Rather, a percentage of the fish in an area (those that are hungry) will slowly move to the gear. But only a fraction of those that are attracted, are actually caught. By attracting dispersed fish to an area, the forage density actually increases. Therefore, this discussion should be moved to the direct effects section as opposed to inclusion here.
26. Page 93, lines 6-7, the fishery opens January 20 (concurrent with CGOA) and closes by emergency order no later than March 31, 2001.
27. Page 94, lines 6-12, these lines should be rewritten to say:
- “Existing state groundfish management measures limit fishing effort in numerous ways that reasonably reduce potential interactions with sea lions, though the extent of any competitive interaction has not been quantified. Moreover, portions of the state managed groundfish fishery are relatively new, so any effects to the sea lion prey field also would be relatively new. Prior to 1995 ...”

28. Page 94, lines 14-49, the discussion of salmon fisheries fails to mention that salmon have greatly increased in abundance over the period of time that sea lions have generally decreased in abundance. It also fails to mention that salmon generally have traveled through sea lion foraging areas by the time they are harvested in the salmon fisheries. Instances in which sea lions forage in the same area in which salmon fisheries occur are rare in comparison to overall sea lion foraging habits. These basic facts should be included in the discussion of potential interactions between salmon fisheries and Steller sea lions.
29. Page 137, line 49, this sentence contains an unwarranted assumption that nutritional stress is occurring. The Endangered Species Act requires NMFS to ensure that its actions are not likely to jeopardize the continued existence of Steller sea lions. A determination of what is likely cannot reasonably be based on an assumption that runs contrary to the evidence. If the evidence (together with a reasonable accommodation of potential error) tends to show that nutritional stress is not occurring, then potential causes of nutritional stress are not likely to pose jeopardy. This unwarranted assumption is moot in this case in light of the conclusion that the federal action poses no jeopardy. But NMFS should reconsider its analysis in future biological opinions.
30. Page 148, lines 19-32, this section does not recognize testimony that has been given a number of times in front of the Council, that local rural residents have voluntarily reduced their subsistence take greatly to aid in the conservation of sea lions. Also, rural subsistence users often inflated their subsistence numbers in the past so as not to be limited if a limit were put in place.
31. Page 148, Section 6.2, analysis of any effects that state fisheries may have on Steller sea lions is a proper subject of the biological opinion, but only to the extent such effects have a logical relationship to an analysis of the federal action. Section 6.2 should avoid legal conclusions about "takes" in state fisheries. If the federal government has concerns about compliance by the State of Alaska with federal laws, those concerns should be expressed elsewhere and discussed with the state fisheries agency and the Board of Fisheries.
32. Page 148, Section 6.2, additionally, analysis of the effects of state fisheries should be treated with the same objectivity and recognition of uncertainty that is afforded the federal fisheries. The merely "rudimentary" understanding of sea lions that is humbly acknowledged in section 5.1.2 should also be acknowledged in section 6.2, and the implications that state fisheries are likely to threaten the existence of sea lions should be eliminated. Evidence that Steller sea lions are not nutritionally limited is no less compelling in the context of state fisheries than in the context of federal fisheries. In addition, the biological opinion should recognize that the State has the best understanding of the abundance and distribution of state resources such as herring, salmon, and cod.
33. Page 148, Section 6.2, because the proposed action analyzed in the biological opinion is described in alternative 4 of the SEIS, the biological opinion apparently relies on the expectation of the Alaska Board of Fisheries taking regulatory action to further restrict fishing during the parallel season for Pacific cod in the Gulf of Alaska. NMFS should provide to ADF&G and the Board, as soon as possible, the precise restrictions it anticipates.



The NMFS Office of Protected Resources and Office of Sustainable Fisheries should also prepare to explain to ADF&G and the Board why those restrictions have been anticipated and the reasons why they believe the Board should impose such restrictions in state fisheries.

34. Page 148, Section 6.2, in regards to the Biological Opinion's discussion on salmon, we find that it does not accurately portray the information this agency has provided NMFS in our comments on the BSAI/GOA Groundfish SEIS and on the Second Half of the 2001 Groundfish Fishing Year EA. That provided information indicated that in the summer, salmon are short term residents and most of the sea lion foraging on salmon occurs upstream of terminal fisheries. Sea lions do not appear to be nutritionally stressed in the summer and salmon stocks are at record high levels. Because no other salmon species are present in coastal waters in the winter, sea lion forage on salmon could only be on late run coho or feeder kings, neither of which has a commercial fishery occurring on them in the winter months. These facts should be acknowledged.
35. Page 148, lines 43-47, see comment 25 above for page 92 lines 13-20, and correct the portrayal of the state fisheries here also.
36. Page 148, lines 49-51, see comment 24 above for page 92 line 12, and fix here also.
37. Page 149, lines 26-27, why should NMFS expect the small boat fleet to grow? We don't.
38. Page 149, lines 32-37, the qualifiers "substantially" and "appreciably" in line 36 should be removed from this section. These qualifiers greatly exceed the available justification because: (1) NMFS has concluded that there is currently no direct evidence of nutritional stress; (2) significant sea lion forage is available both in sizes not targeted by commercial fisheries and as non-TAC species within 0-3 miles; and the state has provided materials showing that the expected impacts of state managed fisheries are likely to be negligible.
39. Page 149, line 37, the sentence beginning on this line should be changed to read: "If the hypothesis that links fishery removals with SSL ability to forage proves true, then State managed fisheries will continue to reduce the abundance of preferred sea lion prey within these marine foraging areas and may alter the distribution of certain prey resources in ways that reduce the foraging effectiveness of sea lions if such fisheries are conducted in a manner that depletes prey fields." This quantifier more accurately reflects the circumstances under which state fisheries could impact nutritional needs.
40. Page 154, lines 48-49, this language greatly contrasts with the discussion on pages 89 and 90, which indicates that state fisheries are a large concern. In such light, state fisheries are provided less precision, accuracy and justification than federal fisheries. We ask NMFS to moderate the language and discussion on pages 89-90 to reflect the tone of the comment on page 154.
41. Page 154, line 50, a new paragraph should be added: "NMFS intends the scope of this incidental take statement to extend to parallel fisheries authorized by the State of Alaska, if the parallel fisheries are authorized and conducted as set forth in alternative 4 of the SEIS.

The analysis in this biological opinion is based on an assumption that the Alaska Board of Fisheries will adopt restrictions in the parallel fisheries so that those fisheries reflect fishing activity in state waters as set forth in alternative 4 of the SEIS. The state-controlled parallel fisheries are inextricably linked to the federal action that is analyzed here, and they have therefore been analyzed as if they were part of the federal action. The incidental take statement provides the same protection for those fisheries as it provides for the federal fisheries that make up the federal action."

42. Page 156, line 19, the words "the potential for" should be inserted after the word "revealed." New information has not revealed conclusively a greater dependence on areas nearshore for foraging outside of the areas also described as important for socializing, nursing, breeding and resting (non-disturbance areas).
43. Page 156, lines 21-23, these lines should be rewritten to say: "If the hypothesis of fishing caused nutritional stress is correct, then fisheries that occur in waters within the jurisdiction of the state may adversely affect sea lions if they are conducted in a manner that depletes prey fields." Again, these quantifiers more accurately reflect the circumstances under which state fisheries could impact nutritional needs.
44. Page 156, line 24, the words "are likely" should be changed to "may."
45. Page 156, lines 25 – 28, this last sentence should be deleted because it is not necessary to the biological opinion, and implies that the State of Alaska is out of compliance with the Endangered Species Act and the Marine Mammal Protection Act.

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SSL EIS  
C-0004

Dear Jim Balsiger,

It has recently come to my attention that the council you sit on will be making a decision next month as to how best deal with increasingly small number of accountable sea lion populations. I am writing this letter to you, and the other council members, with the hope that you will keep a balanced view on this issue. I understand that you are considering shutting down massive areas to all cod fishing, which is concerning.

When debating this issue, I ask you to please do the following:

- Consider the small boat fleet for what it is, and value information from our fleet as a "seperate view" from the billion dollar big boat industry. (By small boats, I mean those under sixty feet without processing or refridgeration capabilities.)
- Look into the fact that the fleet of boats in the Aleutians under sixty feet without processing or refridgeration is: a) miniscule in size b) the cleanest of ail fisheries at risk c) will have minimal impact, if any d) is a valuable part of the lifeline in rural aleutian communities
- Be aware of all bias comment. It is easy to see how the industry is bias in it's thinking. If they get shut down, there will be hurt. But the equally large bias will come from environmentalists, as they are unfamiliar with the environment they seek to protect and are putting large stock into shaky science.
- Remember that small boats don't put our NEAR the pollution large boats do. This means air pollution, fish waste, water pollution, noise, etc.
- Act on Fact. This is hard to do, we don't know most of the facts that need to be known to make a 100% decision, but we know where the studies and experiences point to. We know that in 92 there were 100,000 sea otters west of Dutch, and in 00 there were about 5,000. The number one suspect in that trial is the orcas, number two is disease- not the hunters or fishermen. We know the orcas are getting more aggressive; this is shown in the fact (among others) that they are going shallower than ever before to get halibut off fisher's long line gear. We know that the small boat fleet catches such a small percentage of the aleutian cod, it couldn't possibly be a major contributor to this population decline.

`Small, non processing, non freezing, non invasive vessells are becoming more and more a economic reality out here in the aleutians. As this becomes so, we should support moves in this direction as a clean option to the pollution and waste associated with the larger fleet. "Shutting it all down" so to speak, without room for reform or other options will be detrimental. Like prohibition, or war.

I am confident that should the environmental groups on the other end of the courtroom learn of the realities of the small boat fleet's operations, they would not interfere with our continued effort to create a sustainable fishery.

Please act wisely.

Sincerely,



Jeb Morrow

9-21-01 1514-10 SSL RPA EIS 10pp

# PROWLER FISHERIES, INC.

MAILROOM

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SSL EIS  
C-0005

September 21, 2001

Lori Gravel  
Records Management Office  
National Marine Fisheries Service  
Alaska Region  
P.O. Box 21668  
Juneau, Alaska 99802

**Re: Comments on the Draft Biological Opinion and Incidental Take Statement for the BSAI/GOA Groundfish Fisheries in regards to Steller Sea Lions.**

The following comments are on behalf of Prowler Fisheries who own and operate three freezer-longline vessels that participate in BSAI/WGOA p-cod fisheries. Accordingly, these comments primarily pertain to the western stock of Steller sea lions and proposed RPAs for the longline p-cod fleet. There is one attachment to these comments which is a handout of background material that Prowler Fisheries provided to the NPFMC during testimony at the September 2001 meeting in Sitka, Alaska.

**General:** The draft BiOp is a large improvement over the previous Nov. 30 BiOp in that the new draft includes re-analyzed and new information including: a summation of known sources of SSL mortality; SSL diet trends by region; immature SSL foraging behavior studies; an overview of telemetry studies; and the evaluation of impacts of the proposed RPAs on SSLs.

Due to the stated uncertainty in regards to the nutritional stress hypothesis, it is not clear to Prowler Fisheries that fishing and local depletion are significant factors in the recent (second phase) decline in the population of the SSLs. However, in order to avoid jeopardy and to maintain fishing opportunity (although restricted), Prowler Fisheries accepts the RPAs as developed by the RPA Committee that are contained in the draft BiOp.

The caveat on this acceptance would be that the validity of the nutritional stress hypothesis be tested as well as testing differential gear impacts on local depletion. Each fishery should bear the burden of conservation proportional to its impacts, if any.



Frozen at Sea Longline Caught Fish

**Differential Effects of Gear Type on Local Depletion:** NMFS has conditionally accepted the nutritional stress hypothesis without supporting quantitative data. A markedly different standard is applied to evaluating the likelihood of local depletion by gear type, in which the BiOp is inexplicably ambivalent. In several instances the BiOp states that fixed gear is less likely to cause localized depletion than trawl gear. The discussion of interactive competition (p.87) is confined to trawl gear. Previous BiOps make the distinction between gear types. On the other hand, the draft BiOp also states that NMFS does not have the scientific data to discern the differential possibilities of producing localized depletion by gear type and is left to speculate (p.123).

Both quantitative data and qualitative information were supplied to NMFS during the RPA Committee meetings by the longline sector (Prowler, NPLA et al). This information included a series of charts showing time/area dispersion; a description of the fishery; a bait study paper; corrected catch information etc. This information should be sufficient for NMFS to make an informed decision (as to the likelihood of localized depletion by fixed gear longline) that it is conditionally significant in spite of incomplete or unavailable information. It should be noted that in dealing with large ocean ecosystems, it can always be argued that information will always be incomplete.

Since the RPAs in the draft BiOp include a de facto zonal approach by gear type (in some areas), NMFS should recognize the available information and clarify the decision that resulted in the RPAs and the inherent zonal approach by gear type.

The majority (82%) of the longline harvest in the BSAI occurs outside of Critical Habitat (20 miles) and 76% occurs outside of CH (20 miles) plus the foraging areas. However the harvest inside of CH is still of importance to the longline fleet. The availability of harvest opportunity in these areas keeps the freezer-longline (approximately 37-40 vessels) well dispersed in the BSAI. Loss of access to CH would result in a de facto closure of the AI area due to the steep underwater topography of the AI chain as well as the high number of rookeries and haulouts in the AI chain. Loss of the AI area to longliners would then force the vessels currently fishing there (6-10 vessels) to relocate to the BS where the fleet would be even further concentrated (due to closure of CH also in the BS). The negative effects of this concentration are somewhat depicted in part in the evaluation of Alternative 2 in the DSEIS on SSL Protection Measures.

The telemetry data suggests that the 0-10 mile zones around haulouts and rookeries are significantly utilized by sea lions. Therefore, most of the emphasis on the hypothesized localized prey depletion is focused on the 0-10 mile zone. The rationale for allowing the BSAI longline fleet to fish inside of CH and in particular in the 3-10 mile zone in some areas includes:

- Effort is broadly dispersed over a broad area (see time/area series charts etc.) from the Aleutian chain to the eastern Bering Sea.

- Effort is broadly dispersed over time (see time/area series charts etc.) in the first and third trimesters.
- There is no imminent reason for fleet behavior to change. The fishery is not expanding (Amendment 64) and the fleet size is stable (Amendment 67).
- 94% of the p-cod longline catch comes from vessels with observers aboard. 66% of the p-cod catch is directly observed.
- Scat studies indicate that while p-cod is a component of the SSL diet, p-cod is of considerable less frequency than pollock and salmon (Regions 1,2,&3); and Atka mackerel (Region 4) [Figure 3.1-8, p.3-33, DSEIS].
- The average length of p-cod caught in the longline fishery is 67 cm (1997-98 avg.) while the cod EA indicates that from scat analysis, 80% of the p-cod eaten by SSLs were approximately less than 50 cm in length.
- Longline gear has a lower removal rate than trawl gear. As an indication, in 1999, the maximum weekly catch of p-cod by gear type was: trawl = 7,134 mt/week; longline = 4,547 mt/week; and pot = 2,833 mt/week. The trawl cod harvest is heavily concentrated in the first trimester.
- In the Norwegian hook study (*Responses of Cod and Haddock to Baited Hooks in the Natural Environment*, Lokkeborg et al 1989) less than 5% of the cod reacted to the bait and showed a behavior response pattern. Of those that reacted, only 29% of the cod bit at the bait, and of those that bit the bait only 37% were hooked.
- Longline gear is baited to attract cod and may increase aggregations of cod in the local vicinity from the downstream side (scent). However, the bait is competing with any other available forage in that area for the cod's attention. The hook study indicates that only a small portion of the cod in the vicinity of longline gear are actually hooked.
- Cod have daily rhythmic feeding activity that would effect the CPUE of longline gear via bait response. There are times when the cod maybe aggregated but they are not feeding which lowers the effectiveness of longline gear. Mobile trawl gear is effective on cod whether the cod are feeding or not.
- The physical dimensions of longline gear cover considerably less area than mobile trawl gear. The footprint of longline gear is the same regardless of vessel size and horsepower while trawl dimensions are directly linked to vessel size and horsepower.

Longline gear is benthic gear and is thereby effective in a portion of the water column whereas mobile gear covers a larger portion of the water column.

- Longline harvest is not likely to disrupt schools of cod or aggregations and normal dynamics as is hypothesized with trawl gear in interactive competition (page 87)..

There appears to be enough information available for NMFS to make the determination that longline gear is less likely to cause local depletion (if local depletion is the accepted hypothesis).

**Uncertainty in the Nutritional Stress Hypothesis:** The draft BiOp has numerous references and statements as to the uncertainty of the role of nutritional stress hypothesis in the decline of SSLs since 1990 (see attachment). Seventy-five per cent of the current decline is unexplained and twenty-five per cent of the recent decline is attributable to known takes such as subsistence, killer whale predation etc. Direct evidence for the nutritional stress hypothesis is lacking but *"...since NMFS cannot insure that nutritional stress is not occurring, we [NMFS] will then make the assumption that it is likely, adhering to our mandate to insure that fisheries do not jeopardize listed species."* (page 137).

One large assumption is that the SSL population will stabilize if anthropogenic sources of mortality are removed. This may or may not be the case as all populations in nature are cyclic and all ecosystems are dynamic. It is wishful thinking to have all populations forever stable or increasing. It is also unclear what population level of SSLs is appropriate, that is, the population that is in equilibrium with the environmental conditions and amount of forage biomass. The draft BiOp touches on this uncertainty in the underlying assumptions in the forage ratio method (pp. 143-144). For example, there is an estimate of the peak historic population (200,000) but there is no knowledge of the forage available at that time nor knowledge if this was the appropriate population level for that time and conditions.

Additionally, the BiOp states it is likely that environmental change from the regime shift has resulted in a biomass switch in forage species which has contributed to the decline of SSLs. Given these uncertainties, there is no guarantee that removal of all anthropogenic sources of mortality (such as fishing via prey competition) will indeed stabilize or recover the SSL population. This must be kept in mind in evaluating the RPAs in the future.

Using the precautionary approach, the nutritional stress hypothesis is then conditionally accepted because it can not entirely be ruled out as a factor for the decline. As a result, fisheries are to be managed to avoid reductions in localized prey availability under the RPAs. Since ESA gives the benefit of the doubt to the species, and there is a desire on the part of the fishing industry to have future fishing seasons (without court injunctions), the fishing community largely accepts the RPAs in order to avoid a jeopardy finding.

**Miscellaneous Comments:**

p.9: Reference to Appendix 1 which did not appear to be attached.

p. 84-85: Discussion of overlap between prey size and fisheries is confined to pollock explicitly and all species implicitly. The cod EA contained some specific information relative to cod sizes in scat and in fisheries.

p.123: Concluding statement contradicts numerous previous statements.

p. 155: Incidental Take Statement: Terms and Conditions #4: The use of the phrase "any vessel" maybe inappropriate as some vessels are allowed inside of conservation areas (example: IFQ black cod and halibut). "Any" implies monitoring of all vessels which may be an impossibility for management and enforcement.

We want to thank NMFS for the opportunity to comment on the draft BiOp and hope these comments are given consideration.

Thank you,

A handwritten signature in black ink, appearing to be 'Gerry Merrigan', with a long horizontal line extending to the right.

Gerry Merrigan (on behalf of John Winther)  
Prowler Fisheries



9-21-01

1514-10 SSL  
RPA EIS

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# Groundfish Data Bank

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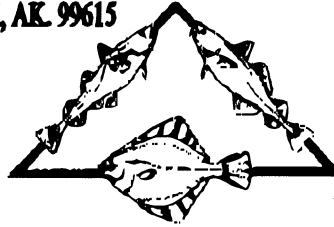
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SSL-EIS

C-0006

Attention: Lori Gravel

## AGDB COMMENTS ON THE DRAFT BIOLOGICAL OPINION AND INCIDENTAL TAKE STATEMENT ON THE AUTHORIZATION OF THE BERING SEA/ALEUTIAN ISLANDS AND GULF OF ALASKA GROUND FISH FISHERIES

### REQUEST FOR FINE-TUNING OF THE GULF OF ALASKA POLLOCK RPA'S FOR 2002

The tentative preferred Alternative # 4 recommends that the 2002 Pollock fishery structure in the Gulf be divided into four fishing seasons of equal TAC allocations. Each season is followed by a stand down period when no directed fishing is allowed.

Table 1. Alternative 4 Gulf of Alaska Pollock fishery structure

Season	Open Date	Closure Date	# of days season	Stand down
A season	January 20	February 25	36	13
B season	March 10	May 31	82	86
C season	August 25	September 15	21	16
D season	October 1	November 1	31	80
Annual Total	N/A	N/A	170	195

The members of AGDB believe that the stand down period following the A and C seasons should be eliminated.

Table 2. Gulf of Alaska Pollock fishery structure removing stand down periods between fisheries

Season	Open Date	Closure Date	# of days season	Stand down
A season	January 20	March 10	49	0
B season	March 10	May 31	82	86
C season	August 25	October 1	37	0
D season	October 1	November 1	31	80
Annual Total	N/A	N/A	199	166

Justification:

(1) The November 1 BOp 3 proposed Gulf Pollock fishing seasons structure did not have stand down periods between seasons. The BOp 3 is considered more restrictive than what was proposed for fishing structure recommendations for 2002 in the BOp 4.

Table 3. Proposed BOp 3 Gulf of Alaska Pollock fishing seasons

Season	Open Date	Closure Date	# of days season	Stand down
A season	January 20	March 31	70	0
B season	April 1	June 10	70	0
C season	June 11	August 21	71	0
D season	August 22	Oct 31	70	81
Annual Total	N/A	N/A	281	81

(2) One of the main goals of the proposed RPA Steller Sea Lion mitigation measures is to spread catch over time (temporal dispersion). The longer seasons allow catch to be dispersed over more fishing days.

(3) In the Bering Sea Pollock fishery there are no stand down periods between fishing seasons (A season runs from Jan 20 to June 10 and B season runs from June 10 to Nov 1).

(4) The BOp 4 page 117 "Two seasons are considered appropriate, with roughly 50% of the harvest occurring in each season to minimize the possibility for localized depletions, four seasons would be more conservative, and further reduce the likelihood of competition between fisheries and Steller sea lions." The Gulf Pollock fishery is a four-season fishery and therefore more conservative.

(5) The Alternative 4 analysis for the jeopardy finding of Steller sea lions did not include additional measures that were retained from the 2001 fishery. These measures include the 300,000-pound trip limit in the GOA, tender restrictions east of 157 degrees W longitude in the GOA, as well as stand-down provisions and exclusive registration provisions between the BSAI and Gulf of Alaska; a net benefit for Steller Sea Lions. These additional measures will help slow the 2002 Pollock fisheries catch rates in the Gulf as well.

(6) The Gulf of Alaska Pollock fishery quotas are apportioned by biomass allocating quota allotments to areas 610, 620, 630, 640 and Shelikof Straits. Apportioning quota based on biomass spatially disperses catch over the entire Gulf, an added conservative measure.

(7) Approximately 6,050 MT of catch has been lost because of the stand down between seasons during the 2001 fisheries. This represents an ex-vessel loss of approximately 1.1 million dollars. The 2002 fishery structure is more restrictive than in 2001. The A and C seasons in 2002 are shorter, a net loss of fishing time of 10 days.

Table 4. 2001 Pollock fishery -- Loss of Pollock TAC as of NMFS web catch information through Sept. 15

Fishery	Season	Unharvest TAC	Loss TAC*	Closure Date
Shelikof Straits	A season	7808	1601	reg close Mar 1
Shumagins-610	C season	2578	668	close Sept 7
Chirikof - 620	C season	5022	3781	reg close Sep 15
Kodiak - 630	C season	1831	0	close Sept 10
Total Loss	Annual	17239	6050	N/A

\*After allowed roll over of maximum of 30% of the annual area TAC provision applied

Table 5. Comparison of A and C season Pollock fishery structures 2001 vs. 2002

Part A. 2001 Fishery Structure

2001 Fishery Structure			
Season	Open Date	Closure Date	# of day season
A season	20-Jan	1-Mar	40
C season	20-Aug	15-Sep	26

Part B. 2002 Fishery Structure

2002 Fishery Structure			
Season	Open Date	Closure Date	# of day season
A season	20-Jan	25-Feb	36
C season	25-Aug	15-Sep	21

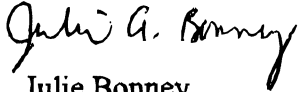
### OTHER COMMENTS

Sec. 3.2.2.2 Critical Habitat Areas with few Observations of Steller Sea Lions: Page 38 lines 15 and 18. "There are also numerous haulouts throughout the range that have had little use over the past 10-15 years...Observations at about 30 sites have resulted in either few or no animals counted there over the last 10 years." In the Gulf of Alaska fishery some of these low use or no use haulouts based on the RPA committee recommendation allow trawling within the 3 to 10 nm range. It would seem appropriate to do a table which compares these 30 haulouts with the proposed fishing restricts for the 2002 fishery management plans to see the interface between reduced fishery restrictions and haulouts with no present time usage.

Table 5.4 Temporal Dispersion and Allocation; GOA Pollock: 30%, 15%, 30% and 25%.  
Should read: GOA Pollock: 25%, 25%, 25%, and 25%.

Thank you for considering these comments.

Sincerely,

A handwritten signature in black ink, appearing to read "Julie A. Bonney". The signature is fluid and cursive, with the first name "Julie" being more prominent.

Julie Bonney  
Director, AGDB

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**Comments on the Draft Biological Opinion and Incidental  
Take Statement on the Authorization of the Bering  
Sea/Aleutian Islands and Gulf of Alaska Groundfish Fisheries**

Submitted by

**Western Gulf of Alaska Fishermen  
6223 43<sup>rd</sup> Ave NE Seattle, Wa. 98115  
Tel (206) 729-8083 Fax (206) 374-2459**

**Submitted to the  
Records Management Office  
National Marine Fisheries Service  
Alaska Region  
PO Box 21668  
Juneau, Alaska 99802  
Attn: Lori Gravel**

**September 21, 2001**

After review of the new Biological Opinion we offer the following comments.

We do understand the desire to achieve an increased measure of “temporal and spatial dispersion” in fisheries, even if we do not fully endorse the concept. Nevertheless we feel it important to point out two changes prescribed in this new Opinion for the Gulf of Alaska, that will likely lead to concentration rather than dispersion in fisheries.

#### **Gulf of Alaska Pollock Fishery**

In the Gulf of Alaska (GOA) pollock fishery, roe-bearing pollock is commonly three times as valuable as non-roe bearing. So, when season apportionment during the roe season change, they merit careful analysis. The proposal to change the “A” and “B” seasons to 25% from 30% and 15% respectively is a very significant action.

In the Gulf, the roe season for pollock normally occurs during the “A” season in area 610, and it usually occurs in the “B” season in Central Gulf areas 630, 620, and Shelikof.

Because roe fish is so much more valuable than non-roe, the net effect in area 610 is net loss of potential gross revenue (lose 5% of the roe fish which is worth three times as much as non-roe, but only partially offset the loss with a 10% gain in non-roe fish).

In the Central Gulf where roe season is “B” season, the results are reciprocal. Taken together, the combined effect is a big increase in value in the Central Gulf versus a loss in the Western Gulf. But, the important thing is that a fisherman with a good market **can and will fish both areas** during the respective roe seasons. The result will be concentration of fishing effort, not “spatial and temporal dispersion”.

#### **Gulf of Alaska P-cod Fishery**

Another change that needs to be highlighted is the so-called 60/40 split for Gulf of Alaska p-cod. P-cod has mainly been harvested during the Winter and Spring. P-cod are generally aggregated during this period and are harvested efficiently. This year, under the 60/40 split a large part of the second season P-cod remains un-harvested. The reasons are many, but we want to make the following point.

By catch of **Prohibited Species (PSC)** shut down this fishery. And it's such a shame.

The Gulf p-cod fisheries have been very clean fisheries. The fishing usually occurred on aggregated stocks with extremely low bycatch rates. Now, under the new plan, the fleet is forced to fish in non-traditional areas, on un-aggregated stocks, at unusual times of the year. Instead of straight p-cod, they catch lots of halibut. This is a failure of the prime directive, to "disperse temporally and spatially". It is just a plain shame. And, the fleet has been saying repeatedly for the last year or more that this would be the case.

The spin off to this waste of the PSC is that development of new fisheries such as arrowtooth is arrested. The opportunity foregone. The PSC could and should be used so much more wisely.

Finally, we want to comment on the need for rationalization of groundfish fisheries in the Gulf of Alaska. The new document identifies and embraces rationalization, as ultimately necessary for the future health of our fisheries. We concur.

Thank you for this opportunity to comment.

Joe Childers

Executive Director

Western Gulf of Alaska Fishermen Association

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September 21, 2001

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Repetition <sup>SSL EIS</sup> C-08-10

Attn: Lori Gravel

Comments on the Draft August 22, 2001 Biological Opinion ("RPA BiOp")

Dear Ms. Gravel:

We offer the following comments on the Draft August 22, 2001 Biological Opinion ("RPA BiOp").

The Draft **RPA BiOp**, p. 7, cites two main reasons for the re-consultation and a new "action-specific" BiOp: (1) new telemetry data on the distribution of Steller sea lions, and (2) a significant deviation from the specific actions required in the Reasonable and Prudent Alternative (RPA) of the November 30, 2000 FMP-level BiOp. However, the action in (2) is premised on the data in (1), and the new telemetry data is a flimsy basis for deviating significantly from the RPA principles and guidelines laid out in the December 3, 1998 BiOp, the October 1999 pollock RFRPA, and the 2000 FMP BiOp.

The RPA BiOp itself and the accompanying telemetry white papers (ADFG 2001; Loughlin et al. 2001) acknowledge the long list of fundamental, substantial caveats associated with the "new" telemetry data and cast considerable doubt on the strength of the interpretation given to the "new" telemetry research in the RPA BiOp, and yet the telemetry data serve as the sole basis for a dubious scheme of partitioning critical habitat into "zones of concern." The remarkable rush to use this new telemetry information (for pups and yearlings only) as a justification for rolling back critical habitat protections has little to do with science and belies NMFS's intention to arrive at a preferred industry conclusion regardless of science or the best interests of the endangered species.

Solely on the basis of new telemetry data for young-of-the-year pups and yearling sea lions, NMFS has made a radical departure in approach from the November 2000 FMP BiOp and from the previous pollock BiOp RPA principles and guidelines (1999-2000) as well as the numerous other Section 7 consultation recommendations and findings since 1990. The telemetry information is only a pretext for withdrawing protection to large portions of critical habitat<sup>1</sup> and justifying the industry/Council preferred RPA. Area by area negotiations with affected groundfish industry interests determined the specific "protections" in the proposed Alternative 4 RPA, not the needs of sea lions based on their biology and ecology.

In the November 30, 2000 FMP BiOp, NMFS concludes that competitive interactions with groundfish fisheries as a whole jeopardize the survival and recovery of sea lions and cause adverse modification of

<sup>1</sup> See percentages at **RPA BiOp**, Table 5.3, p. 122, and total area at **RPA SEIS**, Table 4.8-2, p. 4-240



sea lion critical habitat at three temporal-spatial scales: the global, the regional and the local.<sup>2</sup> The FMP BiOp (p. 259) identifies 4 primary effects categories: effect of global biomass levels, effects of disturbance, and effects of temporal and spatial concentration of fishing. NMFS says the RPA must avoid jeopardy and adverse modification “*at all three scales where the competitive interactions occur*” (FMP BiOp, p. 290). Thus the goal of any acceptable RPA alternative should be to design a fishery based on levels of fishing highly likely to avoid competition with Steller sea lions at the three scales of competitive interaction identified by NMFS in the FMP BiOp.

An adequate RPA package must include the following elements:

- At the global scale, reduce groundfish catch levels. The RPA should employ more conservative exploitation strategies for important forage fishes such as pollock, Atka mackerel, and Pacific cod in order to maintain the forage base for predators at high levels of abundance relative to the unfished condition.
- At the regional scale, disperse groundfish fisheries in time (at least 4 seasons) and space (adequately distributed by management areas, based on biomass distribution if available) both inside and outside critical habitat.
- At the local scale within critical habitat, *eliminate* the possibility of direct food competition and disturbance of the prey field by establishing complete spatial separation of trawl fishing from all critical habitat.

The basis for these RPA elements can be found in the Steller sea lion Biological Opinions prepared by NMFS in 1998 and 2000, as analyzed in the Draft RPA SEIS, Alternative 2 (NMFS 2001). However, we envision that some fishing with lower-impact fixed gears (pot, jig, hook-and-line) can occur within critical habitat with minimal disruption to sea lions or the prey field, as now occurs in Southeast Alaska waters, provided that limits on total catch and measures to spread the fishery in space and time avoid large-scale removals over short periods in concentrated locations (i.e., pulse fishing). Thus we have advocated and endorsed the fixed-gear Pacific cod provisions in the Alternative 2, which would allow fixed-gear vessels (except factory longliners) to operate within 3-20 nm of critical habitat zones around rookeries and haulouts:

- For the fixed-gear cod fishery, employ vessel size and gear limits, daily (or weekly) catch limits, and at least four seasonal allocations of the quota within critical habitat in order to disperse the effort of longline, pot and jig fishermen in a way that is highly likely to avoid harming Steller sea lions.

We believe such a package of RPA measures, analyzed in the RPA SEIS as Alternative 2, will be highly likely to avoid jeopardy and adverse modification of critical habitat, providing major reductions of catch of sea lion prey in critical habitat while allowing a robust and low-impact fixed gear cod fishery within critical habitat. The proposed year-round trawl exclusion in all critical habitat (106,410 nm<sup>2</sup>) would provide substantial benefits to Essential Fish Habitats (EFH) and HAPC species of concern, as noted by

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<sup>2</sup> FMP BiOp, p. 289: “*This competitive interaction, occurring at the global, regional, and local scales has been shown to jeopardize the continued existence of Steller sea lions by interfering with their foraging opportunities for the three major prey species resulting in reduced reproduction and survival.*”

NMFS in the accompanying **RPA SEIS, Sec. 4.8.2** (Effects of Alternative 2 on Marine Benthic Environment): *“This alternative is the most protective alternative under consideration in terms of reducing competition for prey with Steller sea lions, and is also the most protective for EFH.”* NMFS says that the Alternative 2 “zonal” approach to fixed-gear cod fishing regulations within critical habitat is quite protective of EFH and HAPC species.<sup>3</sup>

We do not believe that either the framework RPA (Table 5.2) or the actual proposed RPA (pp. 23-30) meets NMFS’s obligations under the Endangered Species Act. Major shortcomings in the proposed RPA measures are outlined below. Furthermore, there are a variety of places in the RPA BiOp where NMFS notes that more risk-adverse approaches than the proposed RPA are available, but does not explain why such approaches were not assessed or adopted, or how that failure meets the agency’s obligations under the Endangered Species Act.

**The proposed Alternative 4 RPA fails to address cumulative impacts of the fishing exploitation strategy ( $F_{40\%}$  proxy for  $F_{MSY}$ ) at the global scale of competitive interaction.**

- In the November 2000 Steller sea lion Biological Opinion on North Pacific groundfish Fishery Management Plans (FMPs), NMFS concluded that the proxy MSY “harvest policy” ( $F_{40\%}$ ) has reduced important Steller sea lion prey stocks to 40-60% of the expected unfished stock size over time, *by design*. The estimated 40-60% decline in exploited groundfish biomass resulting from the  $F_{40\%}$  harvest policy is “reasonably likely to reduce significantly” the prey base for Steller sea lions over time<sup>4</sup> and to reduce the carrying capacity of sea lion critical habitat.<sup>5</sup> Based on these conclusions, NMFS should have examined an overall reduction in the fishing rate in the FMP BiOp, and in this draft BiOp. Instead, the FMP BiOp confined these concerns to situations where the biomass falls below the status quo  $B_{40\%}$  stock level.<sup>6</sup> NMFS also equated a stock size below the  $B_{40\%}$  level with a “take” of Steller sea lions.<sup>7</sup> Yet the proposed Alternative 4 Global Control Rule does nothing to prevent stocks from falling below the  $B_{40\%}$  “target” stock size because it does not stop fishing until after the *estimated* stock biomass has dropped to 50% of that “target” biomass. At **RPA BiOp, p. 119**, for instance, NMFS says: *“For sea lions, the relevant question is whether fishing under the prevailing exploitation strategy (the global control rule) results in such large overall removals of fish that sea lions are unable to forage at levels that prevent starvation.”* But NMFS concludes that this is a “moderate” concern now, and only *“if the biomass level for these species was to fall below 20% of its theoretical unfished biomass amount...”* **RPA BiOp, p. 116**. The Draft RPA BiOp fails to provide any new evidence that

<sup>3</sup> **RPA SEIS, p. 4-242**: *“is quite protective of EFH and particularly of HAPC species and of nearshore HAPC areas. As described in Sec. 3.8.1, nearshore habitat provides spawning habitat for numerous fish species, including Atka mackerel, and the effect of this approach is that these nearshore areas are closed to all but the least invasive gear types.”*

<sup>4</sup> FMP BiOp, p. 225.

<sup>5</sup> FMP BiOp, p. 259.

<sup>6</sup> FMP BiOp, pp. 250-51: *“However, it is our opinion that biomass reductions of important groundfish species below 40% of their unfished level would not insure the protection of listed species or their environment.”*

<sup>7</sup> FMP BiOp, p. 259: *“The harvest strategy used in the BSAI and GOA has resulted in biomass reductions of Steller sea lion prey on the order of 40-60% from that of estimated unfished levels...As far as the level of effect that constitutes a “take” of Steller sea lions, based on concerns of their ability to forage effectively without reducing appreciable [sic] their likelihood of survival and recovery, take could be expected to occur whenever the biomass of pollock, Pacific cod, or Atka mackerel is below  $B_{40\%}$ .”*

would justify the conclusion or otherwise explain the sudden divergence and downgrading of global-scale concerns that were identified in the November 30, 2000 FMP-level BiOp. Moreover, the model-derived point estimates of stock size are surrounded by large confidence limits that NMFS fails to consider in the Draft RPA BiOp. The RPA BiOp analysis should evaluate error bounds in stock size estimates and the risks associated with ABC levels of fishing based on those estimates, as well as precautionary “control rule” measures to address such risks, including a global control rule that begins to take effect before stock size estimates reach “target” and “limit” reference levels.

**The proposed Alternative 4 RPA fails to provide any reasonable assurance that groundfish catch levels and spatial/temporal distribution at the regional and local scales of competitive interaction will avoid continued jeopardy to the species or adverse modification of nearshore and pelagic foraging habitat.**

- In the RPA BiOp, NMFS continues to improperly conflate analyses of jeopardy and adverse modification. For example, both the jeopardy and adverse modification discussions rely heavily on NMFS’ new zonal approach, without sufficient demonstration of how this approach satisfies NMFS’ obligation to ensure against jeopardy and adverse modification. Rather, NMFS’ heavy reliance on the zonal approach has resulted in a biological opinion in which description and analysis of the effects of the action, the federal groundfish fisheries, on sea lions and their designated critical habitat is virtually absent. Furthermore, the zonal approach effectively amounts to a redefinition of critical habitat, without procedures or analysis.
- The RPA BiOp fails to demonstrate how the proposed RPA avoids jeopardy and adverse modification. For example, with regard to adverse modification, the RPA BiOp states that the value of the marine portions of critical habitat will be determined by the abundance and distribution of prey species. **RPA BiOp, p. 146.** Nowhere in the RPA BiOp, however, does NMFS describe or analyze the abundance and distribution of prey species in critical habitat in light on the proposed RPA, or demonstrate that the value of critical habitat for sea lion survival and recovery will not be appreciably diminished by the proposed fishing plan.
- The RPA BiOp fails to explain or justify how the proposed RPA, which results in continuing negative growth rates and declines in the endangered population over the next eight years, complies with NMFS obligation to avoid jeopardy and promote recovery of Steller sea lions.
- The proposed Alternative 4 RPA fails to achieve significant reductions in catch from critical habitat or to justify the large increases in catches from critical habitat that would ensue in the Sea Lion Conservation Area (SCA) and west-central Aleutians, while maintaining already high levels of pollock and cod trawling in critical habitat of the GOA. Since there are virtually no limits on catch in critical habitat anywhere (**RPA BiOp, p. 125**), this proposed RPA would recreate the conditions that led to successive jeopardy and adverse modification opinions in the first place.
- The proposed Alternative 4 RPA fails to *eliminate* competition between Steller sea lions and the large trawl fisheries in all designated critical foraging habitat around rookeries and haulouts, and in fact would increase both direct and indirect competitive interactions with foraging sea lions in

the eastern Bering Sea and the west-central Aleutians, while maintaining the already high levels of pollock and cod trawling in GOA critical habitat.

- The proposed Alternative 4 RPA fails to address large seasonal differences in sea lion foraging ranges or the need to protect the large aquatic foraging areas beyond 20 nm in Shelikof Strait and the Aleutian Islands, including the Sea Lion Conservation Area (SCA), during the fall, winter, and early spring months when sea lions commonly frequent areas well beyond 20 nm of rookeries and haulouts, based on decades of POP observations, incidental catch records, and available telemetry.
- The proposed Alternative 4 RPA fails to spread the BS/AI pollock, Pacific cod and Atka mackerel fisheries and GOA cod fishery into at least four distinct seasons in order to prevent the majority of the catch from being concentrated into large pulses of fishing during the winter and fall months when NMFS says both adult females and young animals are particularly vulnerable to nutritional stress.
- The proposed Alternative 4 RPA also fails to satisfy outstanding requirements of previous BiOp RPA principles and guidelines, or explain why such measures are no longer necessary, including (1) spatial dispersion by creating area-specific pollock and cod TACs in the Bering Sea east and west of 170 W. Long. outside the SCA, and (2) adequate temporal separation of the “seasonal” TACs to avoid a single pulse of fishing, including provisions to prevent roll-overs of unused TAC from one season to the next.

**The Draft RPA BiOp fails to provide adequate information to assess the impacts or merits of the proposed Alternative 4 RPA, fails to provide reasoned explanations for the significant deviations from previous biological opinions, and the analysis on which the RPA is premised is woefully inadequate.**

- Table 5.2 seems to be NMFS’ framework for the RPA. There are, however, significant differences between the measures described in the Table, and the actual RPA, with no discussion of the differences. Further, NMFS refers to “minimal” levels of fishing in Table 5.2 and in the associated text, but does not define, discuss, or explain the concept or relate it to the agency’s obligations under the Endangered Species Act.
- NMFS fails to explain why, given “the long list of caveats associated with the [telemetry] data,” the agency has embraced the data and radically changed management direction based on that data. Furthermore, while NMFS explicitly recognizes that the newly analyzed telemetry tracking data for pups and juveniles cannot be said to represent foraging locations, throughout the RPA BiOp, NMFS repeatedly ignores this significant caveat and refers to the telemetry data as foraging data. All such misstatements must be corrected.
- At **RPA BiOp, p. 113**, NMFS describes the procedure for addressing the bias in the number of telemetry locations in the first distribution bin, 0-2 nm. Why did NMFS not also consider the nearshore bias in the telemetry for locations beyond 2nm? We would like to see the results of the 90% filter on a larger number of bins, e.g., 3-4 nm.

- NMFS fails to explain or justify the selection of an RPA alternative that will, by the agency's own estimation, result in continuing negative growth rates and declines in the endangered population. The Draft RPA BiOp concludes that, "*it is reasonably likely that the western population of Steller sea lions will experience reductions in reproduction, numbers, and distribution in response to the proposed action and those effects described in the Baseline (Section 4).*" **RPA BiOp, p. 140.** At **RPA BiOp, p. 134**, NMFS says: "*The average trend in abundance for the proposed action is -0.41%...*" Why was there no further consideration of the RPA measures recommended in Alternative 2, which *does* provide a positive growth rate and a basis for recovery?
  
- The DeMaster paper describing the exponential model (Evaluating the Impact of Reasonable and Prudent Alternatives for the Management of the BSAI and GOA Groundfish Fisheries on the Western Stock of Steller Sea Lions) and its discussion in the RPA BiOp are inadequate to provide a clear understanding of how various conservation components of the proposed RPA were weighted and scored in terms of their conservation benefits for sea lions and their habitat. For example, while the RPA BiOp purports to describe the assumptions (see **RPA BiOp p. 128**), it is only during a discussion of the robustness of the conclusions (see **RPA BiOp, p. 135**) that the reader is made aware that NMFS weighted different portions of critical habitat differently. All assumptions and methods for calculating conservation benefits to sea lions, and the justification for such assumptions and methods, must be made clear in the final BiOp. Further, NMFS must explain thoroughly the basis for its determination to include a 2% increase to each of the green areas described in the FMP BiOp, **RPA BiOp, p. 130**, and the reason why NMFS did not correspondingly include a decrease to each of the red areas described in the FMP BiOp to reflect the fact that those areas were not truly closed to fishing under the FMP BiOp's RPA. Finally, there is no explanation why the worst case scenario from the FMP BiOp was used for the comparison, or how this measure relates to NMFS obligations under the ESA, which must be clarified in the final BiOp.
  
- The Draft RPA BiOp, Table 3.1, p. 44, provides non-pup Steller sea lion counts from 1975-2000. However, the available time series of data starts in the late 1950s and can be found in the Steller Sea Lion Recovery Plan (1992), Table 5. Similarly, Merrick et al. (1987) include the earliest trend counts of adult and juvenile sea lions in western Alaska.<sup>8</sup> By using only trend counts from the 1970s, by which time the western sea lion trend count numbers had already declined 50% or more in many regions, NMFS is understating the true abundance of sea lions in western Alaska prior to the decline and artificially lowering any future benchmark for a recovered population. Methodological differences in the earlier survey counts do not invalidate their utility as indicators of a minimum population estimate prior to the decline. If anything, the earliest counts understate true sea lion numbers because not all sites surveyed today were surveyed then, but the earlier counts provide a "baseline" abundance estimate for Steller sea lions in western Alaska prior to the full expansion of the fisheries. Long-term adult and juvenile (nonpup) and pup trend counts should be provided separately, including the regional distribution of nonpup counts as well as pup counts by rookery. For instance:

<sup>8</sup> Richard L. Merrick, Thomas R. Loughlin, and Donald G. Calkins. Decline in Abundance of the Northern Sea Lion in Alaska, 1956-86. Fishery Bulletin: Vol. 85, No. 2, 1987: 351-365.

**Counts of adult and juvenile Steller sea lions at western Alaska rookery and haul-out trend sites, 1956-1998.**

YEAR	SOUTHEAST ALASKA	GULF OF ALASKA			ALEUTIAN ISLANDS		
		EASTERN	CENTRAL	WESTERN	EASTERN	CENTRAL	WESTERN
1956				24,320 (1)			
1957			35,150 (1)				
1959						28,115 (1)	
1960					52,530 (1)		
1962						31,040(1)	
1975(2)					21,221		
1976		7,053	30,677	9,480	22,142		
1977					23,922		
1979	6,376					41,677	14,011
1982	6,898						
1985			24,389	6,667	10,802	25,759	
1989	8,471	7,241	9,614	3,908	3,145	7,759	
1990(2)	7,629	5,444	7,050	3,915	3,801	7,988	2,327
1991	7,715	4,596	6,273	3,734	4,231	7,499	2,411
1992	7,558	3,738	5,721	3,720	4,839	6,399	2,869
1994(3)	8,826	3,369	4,520	3,982	4,421	5,790	2,037
1996	8,231	2,133	3,915	3,741	4,716	5,528	2,190
1998	8,693	1,952	3,346	3,361	3,847	5,761	1,913
2000(4)		1,894	3,117	2,842	3,842	5,427	1,071

(1) Steller Sea Lion Recovery Plan 1992, Table 5.

(2) NMML/NMFS Trend Counts, 1975-1998. Based on June/July aerial surveys of rookery and haul-out trend sites. Trend counts underestimate total population but reflect long-term population trends. Loughlin et al. (1992) applied a 1.331 correction factor (counted nonpups x 1.331) to derive a total population estimate. The first trend counts (1956-1960) totaled 140,000 nonpups in the Aleutian Islands and Gulf of Alaska with no correction factors applied (Merrick et al. 1987).

(3) Sease and Loughlin. 1999. Aerial and Land-Based Surveys of Steller Sea Lions in Alaska, June and July 1997 and 1998, NOAA Technical Memorandum, NOAA-NMFS-100.

(4) John Sease. Steller Sea Lion Survey Results, June and July 2000. 8 September 2000.

CENTRAL GULF OF ALASKA MAJOR ROOKERIES (>1,000 PUPS SINCE 1979) PUP COUNT TRENDS 1979-1998 (1,2)								
	SUGARLOAF ISLAND		MARMOT ISLAND		CHOWIET ISLAND		CHIRIKOF ISLAND	
YEAR	nonpups	pups	Nonpups	pups	nonpups	pups	Nonpups	pups
1979		5,123 (1)		6,741 (1)		5,485 (1)		1,649 (1)
1984		3,184		5,751		3,207		1,913
1985								
1986		3,077		4,381		1,731		1,476
1989		2,109		2,199		820		709
1990		1,638		1,611 (2)		340		607

1991	1,216 (2)		1,459		716 (2)		946 (2)
1992	1,184		1,581		771		770
1994	976	958	1,091	804	599	625	433 325
1996	741		1,102	632	592		360
1997	625		781		538		295
1998	646	703	694	642	515	234	266 184
(1) Steller sea lion Recovery Plan, 1992. Table 6, Pup Counts 1979-1990.							
(2) NMML/NMFS (Draft) Trend Site Counts, 1990-1998. Unpublished.							

Furthermore, throughout the RPA BiOp, different percentages are used to describe the decline in the 1990s. See e.g., page 9 (5%) versus page 128 (4%). As the 5% figure is consistent both with the Loughlin and York recent mortality analysis and with the Sease and Loughlin summaries of survey results, this figure should be consistently used throughout the RPA BiOp.

- NMFS fails to explain why the agency has measured the impacts of alternative RPAs by reference to the sea lion population as a whole, while ignoring regional trends. NMFS must provide a justification for this approach, and discuss how the proposed RPA addresses the needs of subpopulations of the western stock, upon which the health of the stock it relies.
- The RPA BiOp should provide readily available area-specific catch statistics for the entire time period of the sea lion decline, so that longer-term fishery distribution trends can be seen, compared and assessed relative to critical habitat and to RPA actions intended to address the impacts of the fisheries in critical habitat. For instance:

**Bering Sea pollock percent and tons of catch taken from critical habitat (mostly from the SCA), 1977-2000 (1)**

Year	%	Tons	Year	%	Tons	Year	%	Tons
1977	21.6	213,527	1985	20.2	242,334	1993	49.0	679,586
1978	22.5	221,741	1986	22.7	268,967	1994	61.2	870,239
1979	10.6	97,684	1987	48.5	508,150	1995	69.1	849,556
1980	9.5	96,465	1988	53.7	418,933	1996	54.4	614,354
1981	26.3	270,334	1989	45.8	547,690	1997	55.9	594,065
1982	28.3	286,885	1990	36.7	462,523	1998	58.4	607,760
1983	29.3	304,624	1991	52.6	587,160	1999	37.0	350,914
1984	25.2	295,064	1992	46.8	655,029	2000	19.0	217,847

<sup>(1)</sup> NMFS/AFSC unpublished observer blend data.

<b>GOA Pollock Catches Inside Critical Habitat, 1999 (metric tons)</b>						
Season	Months	610	620	630	640	Total GOA
A	Jan-Feb	6,885	11,556	13,063	92	31,596
B	June	5,315	7,207	6,379	-	18,901
C&D	Sept-Oct	4,975	10,499	9,613	-	25,087
	All year	17,175	29,262	29,055	92	75,584
Total GOA Pollock Catch Inside/Outside Critical habitat:						92,121
<b>Percentages Inside CH by area</b>						
Seasons	Months	610	620	630	640	Total GOA
A	Jan-Feb	85%	93%	97%	5%	88%
B	June	82%	92%	97%		90%
C&D	Sep-Oct	58%	62%	96%		71%
	All year	74%	79%	97%	5%	82%

Similar catch statistics should be provided for all regions of critical habitat by management areas, to facilitate ease of comprehension and use of information in the analysis of fishing impacts on critical habitat. Lacking such information and analysis, the Draft RPA BiOp provides no basis for concluding that the Alternative 4 RPA will significantly alter the scale of fishing in critical habitat that prompted jeopardy and adverse modification opinions in the first place.

- In the Draft RPA BiOp, NMFS has assumed that 52% of the eastern Bering Sea pollock stock is found in the Sea Lion Conservation Area (SCA) in the winter, but there is no explanation or justification for the choice of this percentage value. 52% is not consistent with available winter Bogoslof/SCA survey information for pollock during the 1990s, or with the analyses performed by NMFS in 1999. If the 2001 exploitable biomass for the EBS pollock stock as a whole is estimated by the stock assessment model to be 10 million tons, for instance, a 52% value means that 5.2 million tons (give or take) must be in the SCA during some portion of the winter. Yet the results from the 2001 winter acoustic survey in the SCA indicate about 1 million mt during that period, and it seems implausible that the expanded biomass estimate would be five times higher than the survey estimate. The RPA BiOp's choice of 52% fails to consider previous analyses by NMFS in the 1999 EA/RIR for pollock RPAs (see p. 111 and pp. 117-123, Tables 3-5A and 3-5B, Figures 3-17, 3-18, 3-19, 3-20 and 3-21) which indicate that the proportion of age 3+ biomass in the SCA ranged from 26-38%, depending on assumptions about selectivity of the trawl gear.
- The proposed Alternative 4 RPA fails to provide adequate catch limits in the BS/AI critical habitat during the winter season, allowing as much as 75% of the Bering Sea pollock A-season catch to occur in the SCA critical habitat. Aside from the fact that the 75% value mirrors the pollock fishery average from 1991-1998, NMFS provides no justification for allowing such a large percentage of the catch to be taken from the SCA in the winter. Furthermore, the proposed



RPA contains no catch limits for Bering Sea pollock during the summer/fall fishery. Previously in the December 1998 BiOp NMFS recommended distributing the Bering Sea pollock catch proportional to biomass distribution during the summer/fall period, based on the most recent available summer trawl survey information. NMFS does not even consider its own analyses from the EA/RIR for Final SSL RPA Regulations (NMFS 1999, EBS Pollock Catch and Stock Biomass Distribution, 1982-1997), indicating that a very small percentage of the pollock biomass is SCA critical habitat during the summer and early fall period:

<b>Percent EBS Pollock Stock Biomass Distribution By Area Based On Summer Surveys, 1997-1998, 1991-1998, 1982-1998</b>			
<b>AREA:</b>	<b>% 1997-1998</b>	<b>% 1991-1998</b>	<b>% 1982-1998</b>
SCA	6.5	14.5	12.4
E170W	35.5	30.2	25.8
W170W	58.0	55.3	61.7

NMFS fails to provide any rationale for the complete lack of caps on catch in SCA critical habitat or spatial dispersion of Bering Sea pollock TAC by management areas in the summer/fall fishery, utterly ignoring previous agency analyses and RPA recommendations.

- As noted elsewhere by NMFS, the percentages of the GOA pollock and cod TACs taken from critical habitat have remained high because there are no catch limits in critical habitat. Since the rookery no-trawl zones have been in place in the Gulf since 1991-1992, the pollock TAC has come primarily from 10-20 nm of rookeries or from 0-20 nm around haulouts, yet this readily available information was not provided and analyzed in the RPA BiOp. Using available (unpublished) Observer Program catch data, NMFS should provide a detailed analysis of percent and tons of pollock, Pacific cod, Atka mackerel and other groundfish taken from the "zones of concern" within critical habitat, to the extent that the data permits analysis at such spatial scales (e.g., 0-10, 10-20, >20 nm). For example, GOA pollock and Pacific cod taken from within 10-20 nm of GOA rookeries and within 0-20 nm of GOA haulouts over the entire time series of data is as follows:

<u>YEAR</u>	<u>POLLOCK</u>	<u>PCOD</u>
1977	2%	3%
1978	3%	3%
1979	6%	9%
1980	19%	53%
1981	24%	6%
1982	50%	17%
1983	57%	45%
1984	41%	47%
1985	77%	58%
1986	80%	48%
1987	5%	22%
1988	68%	52%

1989	97%	3%
1990	63%	53%
1991	44%	51%
1992	61%	53%
1993	75%	46%
1994	69%	55%
1995	61%	63%
1996	62%	61%
1997	58%	64%

From 1990-97, for instance, the Observer Program data show an average of 63% of the observed GOA pollock catch has come from within 20 nm of sea lion rookeries and major haulouts listed as critical habitat, with twice as much taken from 10-20 nm as from 0-10 nm (NMFS/AFSC unpubl. fishery data):

**Average percent of observed GOA pollock catches within 10-20-40 nm of sites listed as critical habitat in the west-central Gulf of Alaska, 1990-97:**

<u>Within 10 nm</u>	<u>Within 20 nm</u>	<u>Within 40 nm</u>
21%	63%	97.5%

(Source: NMFS/AFSC unpubl. fishery data, 1990-97)

NMFS should have provided this information in detail in the Draft RPA BiOp, in order to assess the distribution of fishing effort and catch relative to the proposed Alternative 4 RPA protection measures for critical habitat. Specifically, the final BiOp should provide the historical catches by fishery, season and gear type within the zones of critical habitat using information from the Observer Program database and the Appendix to the 1999 EA/RIR for Final SSL Pollock RPA Regulations. Lacking such careful analysis of fishing effort and removals relative to “zones of concern” in the proposed RPA, the analysis fails to demonstrate the validity of the RPA “zonal” approach to critical habitat “protection.”

- The Draft RPA BiOp, Table 5.3, p.122, provides very crude percentage fractions of critical habitat that would be closed under Alternative 4. This information is inadequate to characterize the actual area (nm<sup>2</sup>, km<sup>2</sup>) and percent of critical habitat that would be “protected” from 0-3, 3-10, 10-20, and >20 nm under this alternative, including seasonal differences in area/percent protection. The Draft RPA SEIS, Table 4.8-2 (p. 4-240), provides an analysis of areas closed and partially closed to fishing under Alternatives 1-5, although seasonal differences in closure zones are not included in this table. NMFS should combine the format of RPA BiOp Table 5.3 and RPA SEIS Table 4.8-2, providing information on the amount of area (nm<sup>2</sup>, km<sup>2</sup>) and percent of critical habitat that would be “protected” from 0-3, 3-10, 10-20, and >20 nm, by season, by gear type, and by fishery. We also request that the same information be provided for previous pollock RPAs and pre-1999 protective regulations dating back to 1991, specifying the total area protected and any differences in seasonal versus year-round protection for each separate action.

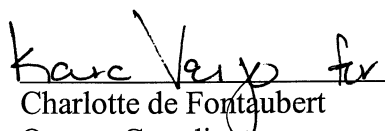
- There is no explanation or description of the “pattern of dispersal of fishing vessels” in areas outside 20nm. **RPA BiOp at 115**. There is no discussion of the edge effect, or an explanation of why it is not an issue for NMFS’s new zonal approach. If the “edge” has been moved inside critical habitat to within 10 nm of rookeries and haulouts, why is there no consideration of the effects on prey availability within 10 nm as a result of concentrated trawling in the 10-20 nm zone? Similarly, if concentrated trawling is occurring on the boundaries of the SCA critical habitat due to lack of adequate spatial dispersal, why is NMFS no longer concerned about the potential intercept effects on prey availability within the SCA critical habitat?
  
- The Draft **RPA BiOp, Figure 4.1, p. 67**, provides Platform of Opportunity Program (POP) sightings, 1991-1997. First of all, why does NMFS only provide POP distributions from the most recent time period, when sea lion numbers are fewest? Why are POP distributions from earlier in the time period not provided, starting in the 1950s? Furthermore, the single POP map at p. 67 is drawn at a scale that does not provide much useful information. More and better POP maps at finer spatial scales should be provided. NMFS should also provide maps showing historical distributions of sea lion incidental catch from the Observer Program database. The bathymetry lines should be provided in order to facilitate understanding of the distribution of sea lions relative to shelf width, shelf breaks, and other features of their habitat. Finally, NMFS states that the POP database “may best reflect the foraging distribution of adult animals.” It is our understanding, however, that the POP database does not differentiate among sightings of adults, juveniles or pups. NMFS should correct this misstatement, which implies that *only* adult distributions are reflected in the POP data.
  
- NMFS should describe clearly: (1) the basis for the statement, “*Even if fishery related impacts to Steller sea lions were eliminated completely, we would expect that decline to continue as a result of environmental pressures that area also acting upon, and reducing the survivability of this population,*” **RPA BiOp, p. 139**; and (2) how this statement relates to and/or is consistent with NMFS’s analyses and determinations in the Steller Sea Lion Protection Measures Draft Supplemental EIS that, for instance, Alternative 2 results in a positive sea lion population increase, and that reduced fishing effort will change the sea lion population trajectory. Although some scientists hypothesize that sea lions declined due to an oceanographic “regime shift” and an “explosion” of gadids, NMFS’s findings in the November 2000 FMP BiOp indicate that pollock were abundant before the regime shift and did not take over the ecosystem after the regime shifted. **FMP BiOp, p. 134**. In fact, the FMP BiOp and current Draft RPA BiOp conclude that conditions for many wildlife prey species actually improved with the 1976-1977 “regime shift” and the benefits of increased productivity from a large number of potential prey stocks would be as likely to increase the ecosystem carrying capacity for top predators as to decrease it. **FMP BiOp, p. 137; RPA BiOp, p. 76**. In addition, the mid-1970s regime shift coincided with a major expansion of the groundfish fisheries in the BSAI and GOA, confounding the ability to differentiate between natural and human effects. NMFS fails to provide any evidence that supports the contention that sea lions would continue to decline in the absence of fishing due to environmental pressure. The RPA BiOp must explain precisely what “environmental pressures” NMFS has in mind, and the precise mechanism(s) by which these pressures are thought to be capable of causing continued sea lion declines in the absence of fishing. If NMFS is suggesting junk food theory as a mechanism, which seems to be the implication, how is that consistent with

the FMP BiOp's finding that the proportion of pollock in the diets of the increasing eastern and declining western stocks are similar? **FMP BiOp, p. 136; Fig. 4.5.**

- There is no explanation of how the research discussed during the Is It Food II? workshop is (1) different from the research discussed during the 1999 Physiology Workshop and considered in the FMP BiOp; or (2) responsive to the Physiology peer review criticisms of existing research data comparing eastern population animals to western population animals.
- At **RPA BiOp, p. 87**, NMFS states that the hypothesis that interactive competition occurs cannot be evaluated with the information currently available. In the section on state-managed fisheries at page 92, however, NMFS states that just these types of effects are occurring, without any explanation of why the evidence supporting the conclusion regarding the state fisheries is unavailable in the context of the federal fisheries.

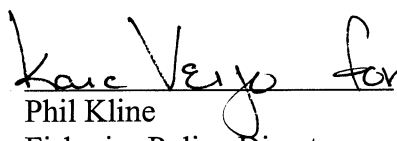
We look forward to a final biological opinion that incorporates these comments.

Sincerely,



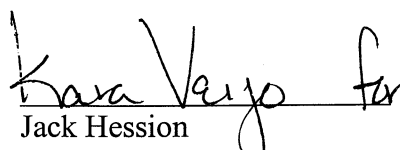
Charlotte de Fontaubert  
Oceans Coordinator  
Greenpeace

0008



Phil Kline  
Fisheries Policy Director  
American Oceans Campaign

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Jack Hession  
Alaska Representative  
Sierra Club

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Attn: Ms. Lori Gravel

**Comments on the Draft Biological Opinion and Incidental Take Statement dated August, 2001**

On behalf of World Wildlife Fund and the National Environmental Trust, we submit the following comments on the draft biological opinion (RPA BiOp).

We fully endorse the comments submitted by Greenpeace, American Oceans Campaign, and the Sierra Club. In addition, as members of the RPA Committee and authors of Alternative 2, we add our comments on the shortcomings of the RPA BiOp and its endorsement of Alternative 4. Overall, we continue to believe that Alternative 4 fails to eliminate jeopardy for the Steller sea lion and adverse modification of its critical habitat.

**POSITIVE GROWTH RATE FOR STELLERS VS. CONTINUED DECLINE**

NMFS needs to provide greater justification for the decision to select Alternative 4 which would result in a -.41% annual growth rate, over Alternative 2 which would result in a +.70% growth rate. This difference in expected growth rates resulted even with the use of the biased scoring system which gave three times as much credit for protections from 0-10 nautical miles as from 10-20 nautical miles.

In addition, NMFS fails to explain or justify why it chose an alternative that will result in continued declines of the endangered western population of Steller sea lions. On page 140 of the RPA BiOp, NMFS concludes that, "*it is reasonably likely that the western population of Steller sea lions will experience reductions in reproduction, numbers and distribution in response to the proposed action and those effects described in the Baseline (Section 4).*" Why did NMFS not consider including some of the conservation provisions of Alternative 2 in the proposed RPA?

**CRITICAL INFORMATION GAPS**

The RPA BiOp has many information gaps. Two of the more important gaps include a failure to include historical catch levels from 0-3 nautical miles from rookeries and

haulouts, 3-10 nautical miles, 10-20 nautical miles, and beyond 20 nautical miles. While these figures have appeared in previous documents, they are missing from this document. This information more accurately assesses where pollock, Atka mackerel and Pacific cod aggregate, a fact that is important to both the fishing fleet and Steller sea lions.

The second gap is a lack of adequate survey data to determine biomass availability in sea lion critical habitat at any given time of the year, and lack of consideration of the confidence intervals around survey data or stock assessment estimates of acceptable biological catch, reflecting the risks of error.

## PROBLEMS WITH TELEMETRY

This information was presented to the RPA committee in March with many of the shortcomings detailed at that time. Those serious pitfalls remain. At the outset, we stated our concerns about the selective nature of the sample (mothers, nursing pups and a few yearlings), the time of year for the samplings (summer, when the mothers have just given birth and will naturally be closer to rookeries and soon after haulouts), and the relationship between hits and shallow water play near the rookery and transits out for longer trips.

Additional problems with the sampling are not only the small number of animals sampled, but also the lack of data for other vulnerable segments of the population, including subadults, females without pups, and mature males. The time of year in which these samples are taken is also a problem. The majority of economic return and catch from the fishery, for which we are recommending changes, occurs during the winter. The vast majority of the telemetry readings occur in the summer and those findings are extrapolated to make conclusions about Steller behavior in the winter. The justification for the almost exclusive reliance on this data for the changed conclusion is absent.

Finally, NMFS acknowledges that telemetry locations are not equivalent to foraging locations, but NMFS provides no rationale for treating telemetry hits as if they reflect the relative importance of foraging habitat.

## MACRO LEVEL MANAGING VERSUS MICRO LEVEL MANAGING

In the November 30<sup>th</sup> BiOp, there were three scales of competitive interaction between fish and Stellers which must be addressed to eliminate jeopardy: (1) at the global scale, reduce groundfish catch levels; (2) at the regional scale, disperse groundfish fisheries in space and time; and (3) at the local scale, eliminate the possibility of prey competition by closing critical habitat to trawling. Since the November 30<sup>th</sup> BiOp is the governing document for this opinion, we fail to see any justification why these principles were ignored in the NMFS analysis.

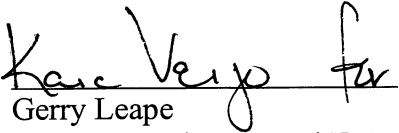
Another inconsistency that must be addressed related to judging the impact of these proposed changes is whether or not NMFS will judge their impact on the micro level, i.e., eastern vs. western Aleutians, or on the macro level, i.e., Bering Sea, Aleutian Islands.

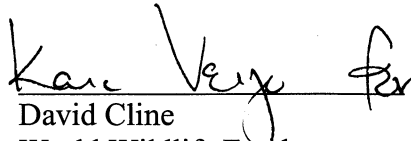
Currently, it seems to be a mixture of both, according to what will allow greater fishing in Steller sea lion critical habitat but result in the appearance of less of an impact on Steller sea lions.

NMFS must explain why the agency has chosen the measure impacts at the scale of the population as a whole, rather than by region. Declines in the western Aleutians, for instance, are ignored because NMFS argues that it is only concerned with the western stock as a whole. No justification is provided for this approach.

Thank you for considering our comments.

Sincerely,

0011   
Gerry Leape  
National Environmental Trust

0012   
David Cline  
World Wildlife Fund

# MARINE CONSERVATION ALLIANCE

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ALAKAGAK  
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KING SALMON  
LEVELOCK  
MANOKOTAK

NAYNEK  
PILOT POINT  
PORT HEIDEN

PORTAGE CREEK  
SOUTH NAYNEK  
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COASTAL VILLAGES REGION  
FUND

CHEFORNAK

CHEVAK

EEK

GOODNEWS BAY

HOOPER BAY

KOPUK

KONGIGANAK

KWIGILLINGOK

MERKORYUK

NAPAKAK

NAPASKAK

NEWYOK

NIGHTMUTE

OSCARVILLE

PLATINUM

QUINAKAK

SCAMMON BAY

TOISOOK BAY

TUNTULIAK

TUNINAK

GROUND FISH FORUM

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ELIM

GAMBELL

GOLOVIN

KOTUK

NOME

SAINT MICHAEL

SAVOONKA

SHARTOOLIK

STEBBINS

TELLER

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UNALASHKA CORP.

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TRIDENT SEAFOODS CORP.

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September 21, 2001

Records Management Office  
National Marine Fisheries Service  
Alaska Regional Office  
P.O. Box 21668  
Juneau, Alaska 99802

Attn: Lori Gravel

Re: Draft Biological Opinion on the Authorization of the Bering  
Sea/Aleutian Islands and Gulf of Alaska Groundfish Fisheries

To Whom It May Concern::

We are writing on behalf of the Marine Conservation Alliance  
("MCA") to comment on the above-referenced Draft Biological Opinion. The  
MCA is a broad-based coalition of Alaska coastal communities, fixed and  
mobile gear fishermen, vessel owners, processors, support industries,  
Western Alaska native villages and related Community Development Quota  
(CDQ) organizations, fishing organizations, consumers and others who are  
directly or indirectly involved in various aspects of the Alaska groundfish  
fisheries. The coalition members have joined together to support science-  
based policy that protects the marine environment and the North Pacific  
fishing community.

Our comments are attached. If you have any questions about them,  
please feel free to contact any one of the signatories to this letter.

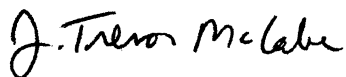
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Juneau, Alaska

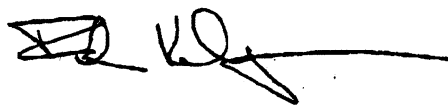


Sincerely,



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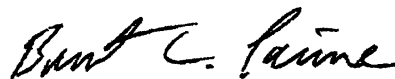
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cc: David Benton, Chairman, NPFMC  
Clarence Pautzke, Executive Director, NPFMC  
William Hogarth, Director, NMFS  
Governor Tony Knowles  
Governor Gary Locke  
Senator Ted Stevens  
Senator Frank Murkowski  
Congressman Don Young  
Senator Patty Murray

**Comments  
on the Draft Biological Opinion  
and Incidental Take Statement  
on  
the Authorization of the Bering Sea/Aleutian Islands  
and Gulf of Alaska Groundfish Fisheries**

**by the  
Marine Conservation Alliance  
645 G Street, #573  
Anchorage, Alaska 99501**

**submitted to the  
National Marine Fisheries Service  
Alaska Regional Office**

**September 21, 2001**

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## **I. INTRODUCTION**

The National Marine Fisheries Service (“NMFS”) reinitiated consultation on the Bering Sea and Aleutian Islands (BSAI) and Gulf of Alaska (GOA) groundfish fisheries’ authorization due to significant new information regarding the biology of Steller sea lions and to proposed changes in the Federal actions in these two fisheries. On July 26, 2001, NMFS reinitiated consultation under Section 7 of the Endangered Species Act, resulting in publication of a Draft Biological Opinion (“Draft BiOp 4”). NMFS concluded in Draft BiOp 4 that the management measures to be implemented in the fisheries do not result in jeopardy of the western stock of Steller sea lions or in adverse modification of sea lion habitat.

These comments on Draft BiOp 4 are submitted by the Marine Conservation Alliance (“MCA”), an organization of fishermen, harvester trade associations, processors, and coastal communities. MCA members and member organizations have worked on sea lion/fishery issues since these matters arose and are committed to reaching conclusions that are based on excellent research and thoughtful policy consideration.

## **II. DRAFT BIOP 4 FOCUS AND BASIS**

Draft BiOp 4’s conclusions are based squarely on substantial new information and analysis developed by NMFS and the Alaska Department of Fish and Game (“ADF&G”) over the last six to nine months as new energy and additional resources have been focused on Steller sea lion issues. The new information and analysis was presented to the North Pacific Fisheries Management Council (“Council”)’s RPA Committee in meetings in February, March, April, and May 2001 by NMFS and ADF&G.

The RPA Committee was established by the Council in January 2001 and is composed of twenty-one members from harvester groups, processor groups, Alaska communities, and environmental groups from both the Bering Sea/Aleutians area and the Gulf of Alaska, and NMFS representatives, ADF&G representatives, and scientists. The Council asked the Committee to review scientific data and make recommendations to the Council on management

measures. The RPA Committee received extensive briefings from researchers dealing with sea lion diet, foraging habitats, telemetry data on movements, causes of sea lion mortality, and sea lion physiology. The RPA Committee met for fifteen days over those four months, with daily opportunities for public comment and with all meetings fully open to the public. Several Committee members made proposals both for the second half of 2001, and for the year 2002 and beyond.

At the April meeting of the Council, the Committee provided recommendations for management measures for the second half of 2001 (with three members objecting and one abstaining), which were reviewed and approved by the Council and accepted and implemented by NMFS. During the June Council meeting, the Committee made recommendations for 2002 and beyond (with three objections). The Council considered the recommendations and approved the measures for analysis, with a schedule of final action to occur in October 2001.

During the two RPA Committee meetings in May, the two NMFS representatives on the Committee presented new information and analysis relating to the foraging behavior of Steller sea lions, particularly pups and juveniles. The NMFS representatives worked as Committee members, searching for useful outcomes, but also provided the Committee with continuing preliminary views of NMFS on possible management measures. In addition, they provided feedback on proposals so that the Committee had a sense of whether the proposals would meet the jeopardy and adverse modification standards. Most significantly, the NMFS members “scored” the proposals, showing the expected effect of proposals on the eight-year trend of the sea lion population direction. During the discussions of proposed management measures for the year 2002 and beyond, the Committee Chair proposed a “Cotter Strawman” proposal as a focus of discussion on overall management measures that could be debated by the Committee and evaluated by NMFS. The Cotter Strawman became the base case for scoring the various proposals.

During the May and June meetings of the RPA Committee and the Council, NMFS scientists explained the change in NMFS’ focus as new data and analysis became available. The

scientists stated that their major concern was with the survival of juvenile Steller sea lions and that new data indicated that juveniles remained very close to shore, particularly during the winter months(seven months as defined by NMFS). Consequently, NMFS placed a significantly increased emphasis on protection measures in areas close to shore, particularly from the coastline out to ten nautical miles. Telemetry information from tagged juveniles and pups showed that over 99%(unfiltered) or 95%(filtered) of the telemetry “hit” locations were within ten miles of shore, and most within three miles.

In response to the new information and the revision in NMFS’ focus, the RPA Committee and the Council recommended significantly changed management measures for the Bering Sea and Aleutian Islands, and Gulf of Alaska fisheries. With the need to protect inshore areas, the measures included closures for pollock trawling inside ten-mile areas at all rookeries and haulouts in the BSAI area and in most rookeries and haulouts in the GOA area. The closure areas included the nineteen additional haulouts that are not part of critical habitat, but that were closed under RPAs. Also, pollock trawling would be closed in the area landward of a line drawn across the entire Southeastern Bering Sea coast from the southwest to the northeast and hitting tangents at all rookery and haulout closures(an additional 2646 square nautical miles). The Bogoslof Area remains closed to pollock trawling and pollock trawling in the Aleutians is prohibited with twenty miles of shore. Overall, more than 60% of the Bering Sea critical habitat would closed to pollock trawling.

In preparing Draft BiOp 4, NMFS refined its analysis of the new data and information on Steller sea lions and concentrated its concern on the area between the coast and ten miles. The proposed management measures from the Council had been guided in that direction in May and June, and placed the greatest protection measures in those nearshore areas. The result is a finding of no jeopardy in Draft BiOp 4. The new information is set out in an Appendix to Draft BiOp 4 as a series of seven white papers prepared by scientists from NMFS, ADF&G, and universities.

NMFS suggested in a cover letter to Draft BiOp 4 that the RPA Committee and the Council consider some additional restrictions in the Bering Sea cod fishery and in seasonal catch limits. In response, the RPA Committee met in late August and recommended (with three objections) new restrictions on the cod fishery near Bering Sea haulouts and tighter seasonal harvest restrictions in the Bering Sea cod and pollock fisheries.

In September, the Council recommended that these new restraints be added to the proposed management measures for a final decision package in October. In its presentation to the Council, NMFS said that the revised proposal results in an improved sea lion conservation score above the proposed measures alone or even above the previous biological opinion. Since the proposed measures were already found to avoid jeopardy and adverse modification, the revised proposal is well above the required standard.

Overall, the significant new data, information, and analyses have been reviewed, discussed and applied to the proposed management measures over the past six months in RPA Committee and Council meetings. The amount of effort is evident in Draft BiOp 4 and the result makes sense.

### **III. ERRORS BY CONSERVATION MEMBERS OF RPA COMMITTEE**

The conservation community has mischaracterized the measures contained in the proposed management measures analyzed in Draft BiOp 4. Based on a letter submitted to the Council at its meeting in Sitka earlier this month, it is clear that the conservation community's opposition to the RPA Committee's recommendation (the Council's "preferred alternative") as modified by the Council at the Sitka meeting) is based on a misunderstanding about key elements of the Committee's proposed package of management measures.

In a letter submitted to the Council on August 29, 2001, Messrs. David Cline, of the World Wildlife Fund (WWF), and Gerald Leape of the National Environmental Trust, both of whom serve on the Council's RPA Committee, wrote that they and Mr. Alan Parks (Alaska Marine Conservation Council's representative on the Committee) had voted against the Committee's proposal because:

- A. The Committee's proposal would allegedly "re-open" critical habitat in the Aleutians for pollock and Atka mackerel trawling; thereby threatening Steller sea lions and their critical habitat;
- B. The Committee's proposal would allegedly "introduce trawling" into coral habitats risking high bycatch of rockfish and other marine life;
- C. The Committee's proposal would allegedly lead to "continued decline - - rather than recovery - - of Steller sea lions;"
- D. The Committee had refused to consider "any provisions of [the environmental representatives'] proposal during the most recent meeting;" and
- E. "NMFS had scored [their] proposal as the only alternative that would result in a positive growth rate for Steller sea lions."

Messrs. Cline, Leape and Parks were mistaken on each count. First, with regard to the pollock and Atka mackerel fisheries in the Aleutians, the Committee's proposal does not "reopen" critical habitat to pollock trawling. Under the Committee's proposal, pollock trawling is specifically limited to the areas outside of critical habitat. There is no indication whatsoever that Steller sea lions would be adversely impacted by a pollock fishery in the Aleutian Island area that takes place outside 20 miles. Furthermore, based on recent scat analyses, it does not appear that pollock is an important prey item for Steller sea lions in the Aleutian Islands anyway. (See white paper prepared by Sinclair and Zeppelin, pp. 10).

With regard to Atka mackerel trawling, except for the brief (but economically disastrous) judicially-mandated closure of all critical habitat to all groundfish trawling in the Aleutian Islands, Bering Sea and Gulf of Alaska in the summer/fall of 2000 while NMFS completed its cumulative impacts BiOp (BiOp #3), a significant portion of the Atka mackerel trawl fishery has always operated inside critical habitat in the Aleutians. The RPA Committee's recommendation actually reduces the amount of Atka mackerel trawling that will occur in various parts of the Aleutians by closing critical habitat in area 541 to Atka mackerel trawling and platooning (dividing) the Atka mackerel fleet into two sectors, each of which is limited to fishing its portion of the TAC in areas 542 and 543 so as to avoid high daily catch rates that result when the entire fleet operates together in the same statistical area, as has repeatedly occurred in the past.. The



RPA Committee's proposal does not "re-open" trawling for Atka mackerel inside critical habitat - - it apportions it - - thereby limiting its potential impact on sea lions by slowing daily harvest in the two statistical areas where critical habitat fishing is still allowed.

Similarly, with regard to the assertion that the Committee's proposal would "introduce" trawling into coral habitats, thereby risking high bycatch of rockfish and other marine life, the RPA Committee's proposal does not "introduce" trawlers into areas they haven't already been operating for years. Furthermore, rockfish bycatch and incidental catch of corals in the Atka mackerel fishery is higher in the areas outside critical habitat than inside. Thus the focus is the proposed platoon system to slow catch rates so that the fishery may continue to occur in critical habitat with reduced potential for localized depletion. This serves both the sea lion protection objective and the objective of reducing bycatch of rockfish and other marine life. Here again with regard to pollock, the Committee's proposal specifically excludes the pollock fishery from the areas about which Messrs. Cline, Leape and Parks were ostensibly concerned.

Their third point, that the RPA Committee's proposal would lead to a continued decline in the Steller sea lion population, also misses the mark. The BiOp makes it clear that, the cod, pollock and Atka mackerel fisheries are but one of many factors that may be contributing to the decline of Steller sea lions. If all groundfish trawling was prohibited inside critical habitat as per the Leape/Cline proposal, the Steller sea lion population would still continue to decline due to other factors such as the regime shift, subsistence hunting, illegal shooting, killer whale and shark predation, etc. To the extent that the target fisheries for cod, pollock and Atka mackerel, are contributing factors to the Steller sea lion decline, the proposal suggested by Messrs. Leape and Cline may have arguably provided marginally greater short term benefits for Steller sea lions than the RPA Committee's proposal, but at a substantially greater cost to fishermen and fishing communities. (The proposal submitted by Mr. Parks on behalf of AMCC, would have provided a lower degree of protection/benefits for Steller sea lions than the Committee's recommendation. See minutes of the RPA Committee's May 2001 meeting in Seattle. In fact, AMCC's approach is internally inconsistent by arguing for protection of inshore areas while also strongly criticizing the telemetry data analysis which points to protection of inshore areas). Over the longer term, all three proposals were projected to generate increased benefits for Steller sea lions insofar as potential impacts from the fisheries are concerned. More

significantly, however, all three proposals would have met the requirements of the ESA - - the avoidance of jeopardy and adverse modification of critical habitat.

Finally, with regard to the suggestion that the Committee refused to consider “any provisions” from the environmentalists’ proposal, the authors neglect to point out that the Committee adopted Mr. Parks’ proposal to exempt smaller fixed gear fishing vessels from the closure of the most sensitive of Steller sea lion areas - - the waters within 0-3 miles from rookeries and haulouts. Even though such vessels are unobserved, do not carry VMS devices, do not weigh their catch or bycatch, do not operate in harvesting co-operatives and are often times outside the jurisdiction of the NMFS, Mr. Parks argued to exempt such vessels from closure of the areas where Steller sea lion pups and juveniles are most likely to be encountered and where groundfish prey is most likely to be an important food source. Despite these concerns, the RPA Committee agreed for reasons of safety at sea to support an exemption for such vessels from the closures that will apply to all of the other fishing vessels in the GOA and BSAI areas.

Whether or not Messrs. Leape, Cline and Parks would have supported the Committee’s proposal even if they fully understood the elements of that proposal more clearly remains to be seen. Their letter, however, clearly reflects a misunderstanding as to key elements of the Committee’s recommendations and the response to comments on the BiOp should so note.

#### **IV. SEA LION DECLINE CAUSES AND NMFS’ PRECAUTIONARY APPROACH**

The September 4-5, 2001 minutes of the Council’s Scientific and Statistical Committee contain the following:

“Nevertheless, the true cause(s) of the continued decline and lack of recovery of Steller sea lions remain unknown; as does the impact of the groundfish fishery on Steller sea lion survival. Consequently, the proposed federal action is motivated by precautionary consideration of the potential for adverse fishery effects.”

In Draft BiOp 4, the MCA believes that NMFS has applied an extraordinarily conservative approach to the analysis, giving the benefit of the doubt to protection of Steller sea

lions at every step. Even with that conservatism, Draft BiOp 4 reaches a no jeopardy conclusion and, in evaluating the revised proposed management measures, determines that those measures are well above the required standard. The following reviews the steps in the overall approach by NMFS:

1. Mortality Causes. Draft BiOp 4 contains the conclusion that no evidence or studies exist that point to nutritional stress as the cause of the continued population decline in the 1990s. Although NMFS believes that nutritional stress may have been a contributing cause in the 1970s and 1980s, NMFS now finds no evidence that it is a continuing cause during the last years. In the “Is It Food II Workshop?” convened by NMFS to address this question, a majority of the twenty-four scientists stated that they do not believe nutritional stress is a primary cause of the continuing sea lion decline. However, although NMFS admits that there is no evidence of current nutritional stress, NMFS still moves forward with the analysis as if there were evidence. This first lynchpin of the analysis rests on no evidence.
2. Fishery Competition. Even if one assumes, as NMFS does, that nutritional stress is a significant cause of the current decline, the analysis must then show that the stress is caused by competition with the fisheries in order to find jeopardy. The Scientific and Statistical Committee, again in its September 4-5, 2001 minutes, states that NMFS needs “to demonstrate that the most vulnerable life-stages of Steller sea lions are taking the same species and size classes of prey and in the same regions and depths as the fishery”. However, MCA believes that Draft BiOp 4 concludes (p. 85) that the degree of overlap based on prey size is unknown for most species and only that depth overlap “may occur”. The flimsy nature of this evidence is underscored by the results of the “Is it Food II Workshop” in which twenty of the twenty-four scientists stated that they do not believe that fishery competition is a primary cause of the decline. Lynchpin # 2 has little foundation.

3. Type II Error. In spite of the lack of evidence and foundation for nutritional stress, NMFS explains in Draft BiOp 4 that it must avoid a “Type II Error”, i.e. it must avoid concluding too easily that nutritional stress and fishery competition are not the primary current cause of the decline. Based on the best scientific evidence available, NMFS would be entirely reasonable in concluding that fisheries are not the problem. However, Draft BiOp 4 states (p. 106) it must give the “benefit of the doubt” to the endangered species, a strongly precautionary approach.

Although it is true that federal agencies must give the benefit of the doubt to the species in taking the first step in the ESA consultation process by consulting with NMFS or the Fish and Wildlife Service, the analysis and decision after that first step does not require proving a negative, i.e. that NMFS is certain that fisheries are not the problem. In fact, the 1979 amendment to the Endangered Species Act cited on p. 106 of Draft BiOp 4 was specifically intended to soften the requirement, and to eliminate the need to prove negatives. The prior language that NMFS must ensure no jeopardy was amended to ensure that jeopardy is not “likely”. NMFS and the Fish and Wildlife Service have published their handbook on procedures and standards under the Endangered Species Act. Part 4 of the Handbook on Sec. 7 consultations never even uses the term “precautionary” or “benefit of the doubt”. Extensive case law simply requires NMFS to use the best available scientific evidence and to make reasonable decisions.

4. Conclusion. Draft BiOp 4 takes an extremely conservative, protective approach. The scientific evidence does not lead to the conclusion that nutritional stress is occurring nor to the result that fishery competition is causing the decline. The legal standards do not require the degree of caution in Draft BiOp 4. That the proposed management measures receive a “no jeopardy” finding at the end of such a protective process is extraordinary evidence that the fisheries will not have a negative impact on Steller sea lions.

## **V. TELEMETRY DATA ANALYSIS**

Substantial new data has become available since the publication of earlier Biological Opinions. The new data includes significant new information on the foraging behavior of Steller sea lions which directly impacts the potential competition for prey by Steller sea lions and the commercial fishing fleet, and the development of effective management measures.

This new information in BiOp 4 is scattered throughout the draft document, often interlaced with caveats. While we appreciate the intellectual honesty demonstrated by the agency in BiOp 4 regarding the uncertainty surrounding the causes of Steller sea lion decline and competition with the commercial fishing fleet, some of the caveats used in portrayal of the new data do not seem justified. The best example of this is found in Section 5.2.1.4 "Further Discussion on Satellite Telemetry Information."

This section reaffirms that, while NMFS previously considered nearshore areas most important to Steller sea lions, it had to treat all critical habitat to be of equal importance to Steller sea lions because it was unable to quantify the amount of time spent in nearshore areas. The new telemetry and other foraging data changed that.

As shown in table 5.1a, and as described in the unpublished paper by Loughlin et. al., 95% of pup and juvenile (the population of most concern) telemetry hits occurred within 10 miles of shore, most of it within three miles. The document discusses potential biases of the data based on different behaviors of Steller sea lions near to shore including resting, sleeping and social interactions. However, it fails to use a scientific basis to filter out potential biases. Despite information in Loughlin's and Andrews' papers, as well as other information that further substantiates the importance of nearshore areas, the BiOp utilizes a table that filters out 90% of all telemetry hits within 2 miles.

The choice of 90% was not based on any direct evidence and it is described in the BiOp (pg. 112) as "highly theoretical" and represents what is described in the document as the "upper bound" to be used in considering the importance of offshore areas. Even with the 90% filter, the

number of near-shore contacts is large and validates NMFS' conclusion that the zero-to-ten mile area is the most significant area for younger animals. However, because of the importance of the telemetry data, the agency should make every effort to determine a scientific method to filter out all potential biases in the final BiOp.

**VI. MARINE CONSERVATION ALLIANCE RECOMMENDATIONS ON PRESENTATION OF TELEMETRY DATA AND ANALYSIS**

A. The Marine Conservation Alliance makes the following recommendations to improve the scientific method to filter out potential bias in the telemetry data:

1. Known behavior. Use information from the Loughlin's and Andrews' papers on the behavior and feeding patterns of juvenile Steller sea lions to determine a filter that best conforms with known foraging and prey consumption patterns of Steller sea lions, particularly pup/juveniles and adult females.
2. Logical Approach. Re-examine the scientific value of using a 90% filter by considering the illogical implications the filter imposes on known Steller sea lion foraging behavior. For instance, by filtering out 90% of pup/juvenile hits, table 5.1b then appears to indicate that young Steller sea lions do relatively more foraging in areas greater than 20 miles from shore in the summer. Given the locations in the Gulf of Alaska and Aleutian Islands where sea lions have been fitted with telemetry devices, this distance from shore would mostly place the animals in extremely deep water. If groundfish species are the forage species of interest, then the reliance on foraging in areas greater than 20 miles from shore makes little sense because there is little groundfish prey at the dive depths accessible to juvenile sea lions.
3. Weekly Data Sets. Incorporate weekly telemetry data information about individual animals as described in Mr. Dave Fraser's public testimony rather than a view of several months at a time which does not accurately reflect the number of trips in the nearshore areas that including no offshore traveling.
4. Resting Behavior. The BiOp suggests that "resting" near-shore may create a bias toward increased transmission rates. However, the recovery period after deep dives is

likely longer than after shallow dives. As animals go further offshore, if they are diving deeper (which is likely given bottom contours), they should also spend more time at the surface recovering from foraging dives. The dive profiles for offshore trips versus near-shore trips need to be compared to see if they shed any light on possible bias. We may find that animals spend more time at the surface once they have reached an offshore foraging area than they do when they are near-shore. Times when animals are transiting should be eliminated from the "offshore" profile to the extent possible.

5. Nearshore Activities. As the BiOp states on page 113, “various sea lion behavior types will influence the data transmission rate”. The social behavior in Steller sea lions near-shore includes activities such as playing that may involve frequent shallow dives. Near-shore activity may also involve transit parallel to shore, which may include frequent shallow “porpoising” (0-4 meter dives). These activities would turn the transmitters off and thus under-represent near-shore activity.
6. Sleeping Behavior. The BiOp mentions “sleeping” as a near-shore behavior that may create a bias toward increased transmissions. Examination of offshore positions suggests that they tend to be associated with multi-day trips. It seems reasonable to assume that sleeping behavior in the water would be as common offshore as near-shore. The BiOp presents no information on sea lion sleeping posture, leaving open the question of whether the tag is likely to be “wet” or “dry”. If the tag is likely to be wet, that could create a bias toward under-representing near-shore transmissions.

B. The MCA recommends that, if a 90% filter is used, it should clearly be identified as an extreme outer bound for interpreting the data and include the following information:

1. Highlight that even in using an extreme outer bound of 90% to filter out potential bias in the telemetry data, the data clearly shows that nearshore areas are significantly more important to Steller sea lion foraging and that any precautionary restrictions are

best focused in those areas. While this was said several times by NMFS staff during their presentations to the Council, it is not included in the draft document.

2. Include comparative discussion of scientific value of telemetry data and old POP data (see below).

C. The MCA recommends that tables 5.1a and 5.1b include better descriptions of the data:

1. Include information on number of trips.
2. Define winter and summer seasons.
3. Add a field for 0-10 nm to help identify the importance of foraging activity inside the ten mile protected areas.
4. Describe the two populations tagged (pup/juveniles and adult females).

D. Further Analysis by MCA Members of the Telemetry Data.

MCA Members are continuing to work on an analysis of the telemetry data that the MCA intends to submit to NMFS. Unfortunately, because of computer problems caused by the nimda worm at both NMFS and SeaState, the analysis is not complete. MCA hopes to complete it within a few days for submission. In addition, MCA intends to submit the analysis to the Council at its October meeting and in the MCA comments on the SEIS.

## **VII. SEA LION PROTECTIVE EFFECTS OF THE AMERICAN FISHERIES ACT**

The "Objectives and Background Information" chapter of BiOp#4 indicates that the BiOp "evaluates two [separate] actions". Those actions are identified as (1) the Steller sea lion conservation measures for the pollock, cod and Atka mackerel fisheries of the BSAI and the GOA (amendments 70/70); and (2) the final regulations to implement the American Fisheries Act of 1998 (amendments 61/61). The following 166 pages of the BiOp proceed to evaluate various aspects of the proposed sea lion protection measures in great detail. But, except for a brief discussion of the statutory provisions of the American Fisheries Act of 1998 (the AFA), at



pp. 20-23, there is virtually no analysis or "evaluation" of the effects that the AFA provisions have had on the subject fisheries. Nor is there any discussion of the benefits that AFA-related measures have had insofar as sea lion protection is concerned. In our view, this is a major shortcoming of the BiOp.

The AFA profoundly altered the way in which the groundfish fisheries off Alaska are conducted--at least the way in which the fisheries prosecuted by "AFA" vessels are conducted. These changes have in turn resulted in fishing patterns and other operational characteristics of the fisheries that afford significant levels of protection to Steller sea lions and other components of the BSAI and, to a somewhat lesser extent, the GOA ecosystems. For example, the introduction of harvesting cooperatives in the BSAI pollock fishery represents one of the most innovative developments in fisheries management in the past decade. As explained more fully below, coops have de-capitalized the pollock fishery, ended the race for fish in that fishery, reduced the spatial and temporal concentration of the fishery, reduced bycatch, increased yield and facilitated a more responsible approach to management. Yet none of these developments, many of which inure to the benefit of sea lions, are mentioned, much less "evaluated" in the BiOp.

The BiOp's failure to discuss AFA-related benefits to Steller sea lion protection efforts is curious. This is especially so in view of the fact that the Emergency Rule under which the fishery has been operating this year specifically conditioned authorization of the 2001 BSAI pollock fisheries on continuation of the pollock harvesting coops that have been formed under the auspices of the AFA. (See 66 FR 7262-7327, at 7278, Jan. 22, 2001). Furthermore, 50 CFR Section 402(g)(8), which governs the development of biological opinions, specifically requires consideration of beneficial actions taken prior to the initiation of consultation:

“(8) In formulating its biological opinion,... the Service will use the best scientific and commercial data available and will give appropriate consideration to any beneficial actions taken by the Federal agency, ...including any actions taken prior to the initiation of consultation” .

In the MCA's view, the overlay of AFA-related management measures is an indispensable part of the regulatory regime that must be evaluated and discussed in BiOp #4. Therefore, we recommend that the final document include a detailed discussion of the AFA and how the management regime implemented following its passage has benefited Steller sea lions--justifying, at least in part, the document's "no jeopardy/no adverse modification" conclusion. For example, we would recommend the following:

1. Pre- and Post-AFA Fisheries Characteristics. Include in the BiOp a comparative analysis of temporal and spatial characteristics of the BSAI pollock and cod fisheries pre- and post-enactment of the AFA and discuss how the AFA has spread out the BSAI pollock fishery both in space and time. It is clear that the nature of fishing under cooperatives created by the AFA has allowed the pollock fisheries to spread their catch spatially and temporally, consistent with Steller Sea Lion protection measures.

The effects on harvest can clearly be seen in Figures 1 through 3. Figure 1 illustrates Bering Sea pollock harvest by the AFA shoreside catcher vessel fleet. What is apparent in this figure is that the peak harvest is down somewhat in 2000 from all previous years and the length of season extends longer than all previous years. Also apparent is the shift of effort earlier in the second part of the year for 1999 compared to earlier years, and even earlier still in 2000.

Figure 2 provides analogous data for the BSAI pollock mothership sector. There are a couple of changes of note over these years. First is the drop in the peak from the years 1996-1998 to the year 1999 (the first year of offshore co-ops) in the early part of the year ("roe season"), and then a dramatic drop in this part of the year from 1999 to 2000 (the first year of mothership co-ops). Looking at the summer/fall season, there is an earlier start as well as the sharply lower peak for 2000 compared to previous years.

Figures 3(a) and 3(b) compare BSAI pollock catcher processor harvest activity during two periods of time. The first period, 1995-1998, reflects fishing patterns during the

pre co-op "race for fish"; and the second period, 1999-2001, reflects fishing patterns following formation of the at-sea harvesting co-op as authorized by the AFA. These figures demonstrate two of the benefits that the AFA has generated insofar as sea lion protection is concerned. Under the co-op harvesting regime, for example, the "A" season pollock fishery now lasts almost three times as long as it did during the "race for fish" and the maximum daily catch rate is about 40% of the levels seen in pre co-op days. The fishery has been temporally (and spatially) dispersed, with the "pulse" type fishery that was characteristic of the "race for fish" being replaced by a moderately paced fishery that takes place over an extended period of time.

The AFA not only had positive effects on the BSAI pollock fishery, but on the sideboard fisheries as well. Examination of Figure 4 shows how the AFA and the establishment of co-ops has resulted in the spreading out and reducing the weekly harvest rate of cod from the BSAI catcher vessel trawl sector. Under the AFA, the catcher vessels no longer have to race into the cod fishery once the pollock roe season concludes. They now have the ability to fish both species simultaneously thereby lengthening the cod season and reducing the weekly harvest peaks from pre-AFA highs of 5-6 thousand tons/wk to under 3,000mt/wk post AFA.

These figures clearly illustrate the termination of the race for fish. In Chapter 5.3, Effects of the Action on SSL and their Critical Habitat, the analysis discusses the direct and indirect effects of current fisheries relative to the status and prey needs of the sea lion. In section 5.3.1.3 the authors state, "High levels of harvest during particular seasons may adversely affect sea lions even if the total annual harvest level is not a threat. ...Particular levels of TAC, even when divided into seasons, can result in a race for fish that concentrates fishing effort in a short period of time until the TAC is caught and the fishery closed." Rather than leave this statement open-ended, we suggest including the above noted information on how the AFA has terminated the race for fish in the BSAI pollock fishery as well as the newly established AFA sideboard fisheries. Inclusion of information showing reduction in the average daily

harvest of cod and pollock in the BSAI trawl fisheries illustrates how the AFA has reduced the daily harvest rate and increased the length of the seasons thereby eliminating the pulse-type nature of open access fisheries. Therefore, we recommend including graphic illustrations showing 1) total season length of the fisheries, 2) average harvest per day, by sector, and 3) harvest per day and total amount within SSL critical habitat, for pre- and post-AFA BSAI pollock and cod trawl fisheries.

2. Catch Accounting and Monitoring. Include in the BiOp information on improvements in catch accounting and monitoring due to enactment of the AFA. In the North Pacific Fishery Management Council's September 10, 2001 Report to Congress on the AFA, information is presented that discusses the improvements to monitoring and enforcement of the pollock fishery by the NMFS. The cooperative management structure has shifted more of the monitoring and enforcement burden to the cooperatives and their members, which has allowed the fishery to be managed more precisely. Monitoring their own catch, vessels are able to individually and in the aggregate come very close to harvesting exactly the amount of pollock they were allocated. This enables the fleet to avoid overharvesting discrete area quotas that, in the past, were difficult for the agency to manage.

The AFA mandated that two observers be onboard catcher/processors in the BS/AI pollock fishery. Prior to implementation of the AFA, catcher/processors were required to carry one observer. Increased observer coverage provides better information on the actual harvest. The AFA also mandated use of scales to more accurately weigh fish in the catcher/processor sector. Prior to the use of scales on all AFA catcher/processor vessels, NMFS often estimated catch using product recovery rates to back calculate total catch from finished product. Such product recovery rates were based on industry averages and seldom reflected the actual recovery realized on any given vessel. We recommend that these benefits to the management of the fishery be included in the BiOp.

3. AFA Impact on Sea Lion Measures. The analysis should include information about how the AFA provides the fishing industry with the tools and flexibility to comply with additional requirements in a rational manner. While the Steller sea lion management measures require spreading out the fishery in time and space, it was the AFA that allowed members of the fishery to comply with those requirements. The negative impacts of recent SSL protection measures were lessened by the AFA. For example, many small catcher vessels would have had difficulty competing with the larger vessels as the fishery was pushed farther offshore. In addition, managing an inside critical habitat catch limit without the AFA would be very difficult.

Under AFA regulations, the pace of the fishery can be voluntarily adjusted, e.g., allowing time for each respective sector to be more “selective” in its fishing practices, prospecting for larger fish and, thus, avoiding concentrations of smaller fish, moving out of areas of high bycatch, or PSC concentrations, etc.

4. Harvester Cooperatives. Harvesting co-operatives have proven to be an effective vehicle for the control and reduction of bycatch in the pollock fisheries. A good example is the salmon reduction plan implemented this past year via an inter-coop bycatch avoidance program that utilizes real time data from the fishing grounds to alert fishing vessels of bycatch hotspots and that rewards vessels that successfully keep their bycatch rates below pre-determined levels. A discussion of the bycatch reduction benefits of coops should be included in the BiOp as well.
5. AFA Conservation Benefits. Lastly, 50 CFR 402.14(j) specifically authorizes the "consulting agency" to provide with the biological opinion "a statement containing discretionary conservation recommendations" which, although such recommendations do not have the force of law, can be an effective way of influencing future management decisions. Therefore, we suggest that the BiOp be revised to include a section that describes the conservation benefits attributable to the enactment of the AFA and subsequent fishing practices by the AFA fleets. To the extent the no

jeopardy finding is premised on a rationalized pollock fishery and the corresponding absence of a race for fish, the BiOp should so indicate.

### **VIII. BIOP TREATMENT OF POTENTIAL COMPETITION WITH FISHERIES**

The MCA makes the following recommendations regarding certain aspects of potential interactions of the fisheries with Steller sea lions. While the current BiOp provides a much more scientific treatment of the potential causes for the current and past decline in the Western population of Steller sea lions, the discussion of some aspects of the fisheries and the potential interactions with Steller sea lions suffers by the incorporation of several statements based on little more than pure speculation. Such speculative statements draw attention away from the scientific issues and data discussed in the balance of the document. Federal case law bars NMFS from speculation in analyzing jeopardy and adverse modification issues under Sec. 7 of the Endangered Species Act.

1. Overstatement of “evidence” of localized depletion (Page 87, lines 13-16). The analysis cites an unpublished paper (Fritz unpublished) to substantiate the statement that analyses have shown that repeated trawling can lead to severe localized depletions. While the statement is later qualified to say that the number of schools affected and the effects on schooling dynamics are not known, these caveats do little to reduce the strength of the statement suggesting that NMFS has reasonable evidence of localized depletions from trawling. The unpublished paper cited as a basis for this evidence was written in 1997 and it continues to reemerge in biological opinions as statistical evidence of localized depletion. A number of scientific reviewers (including one hired by NMFS) have raised significant issues regarding the appropriateness of the analytical techniques used in the paper and the treatment of the data. As far as we know, none of these issues have been resolved.

**Recommendation:** Given the serious issues raised by reviewers, the controversy surrounding the results, and the fact that the paper has still not been approved for publication by any scientific journal, we feel it is inappropriate to cite this paper

as evidence of localized depletion (especially “severe” localized depletion as the BiOp states). Unless NMFS currently has any sound scientific evidence of localized depletion, we suggest that lines 13-18 be omitted. Alternatively, the characterization of the quality of the evidence should include the major issues raised by reviewers including the North Pacific Council’s SSC as reflected in their June 1998 minutes.

2. Atka mackerel stock dynamics (BiOp page 18, lines 35-42). This section speculates on the migration patterns of Atka mackerel and suggests that Atka mackerel migrate from the Aleutian Islands to the Gulf of Alaska. The section further suggests that fishing for mackerel in the Aleutian Islands could have downstream effects on the Atka mackerel found in the Bering Sea and Gulf of Alaska. While the analysis cites a source (a chapter in the 1997 SAFE report), careful review of the source information shows that there is no definitive scientific information to support the hypothesis. The claim of a linkage is based on a single, unsupported mention therein of the possibility that mackerel found in the GOA come from migration of adults or subadults originating in the Aleutian Islands. Two papers cited in the stock assessment (Levada 1979 and Lee 1985) conclude that there are morphological and meristic differences in Atka mackerel from the different areas in the Aleutian Islands and Gulf of Alaska (Levada 1979). This would suggest separate populations, not migration. The stock assessment, however, also notes that a genetic study found no evidence of discrete stocks between GOA and the Aleutian Islands (Lowe et al. 1998), but this does not necessarily mean that a demonstrable migration pattern exists between the Aleutians and GOA. In the end, this may be a classic case where something mentioned in an unpublished paper gets cited over and over without critical review. Data to support a possible linkage between mackerel found in the Gulf and in the Aleutians would be such things as results from a tag return experiment, for example, but no information of this type is presented. In fact, the Alaska Fisheries Science Center (REFM) is currently conducting a tag and recovery study that was started in 2000. Thus far, the study suggests that a very high

percentage of tags have been recovered in the Segum area within a very small distance from where fish were tagged (See February 2001 Atka mackerel tagging project cruise report summary). While the possibility that mackerel move east as they mature cannot be eliminated, it is not backed by scientific evidence and it does not appear to comport with preliminary findings from NMFS' ongoing tag return study

**Recommendation:** In our view, the speculation simply serves to suggest that the consequences of fishing or other effects/changes in Aleutians mackerel may be greater than anticipated and may affect an area wider than the Aleutian Islands. The opposite seems to be an equally possible assertion at this point. In the end, we feel it is probably best not to speculate about possible migrations and interrelations of mackerel found in different parts of North Pacific waters until scientific evidence becomes available.

3. Section on interactive versus exploitative competition (pages 86-88). This section speculates about how trawls may break up fish schools and possibly disadvantage Steller sea lion foraging (or perhaps advantage it). The theoretical concept of interactive competition is treated as a second type of potential competition for forage over and above the simple issue of removal of fish. The premise of the interactive competition theory is that fish schools are somehow disaggregated by trawling, making sea lion foraging more difficult. There is not a single citation of supporting scientific information in this section and, to our knowledge, NMFS is relying on nothing more than a theory lacking empirical evidence. A theoretical discussion of interactive competition was included in the November 30, 2000 BiOp. What is new here is the focus on the question of which fisheries might create more profound degrees of this undocumented theoretical phenomenon: is it fisheries which are unable to employ fish finders to find fish aggregations such as Atka mackerel, or is it fisheries where fish finders can be used effectively to find fish schools, such as for pollock? Once again, however, this section adds no concrete information to the analysis because NMFS has no data or even consensus of scientific opinion to inform the reader. The levels upon levels of speculation about interactive competition



discussed in this section makes it sound like the agency has considerable empirical proof to back this theory when it has none.

**Recommendation:** This whole section should be removed.

4. Discussion of potential for cumulative effects from additional competition created by fisheries other than pollock, cod, and Atka mackerel (pages 87-88). Starting on page 87, line 40, a discussion of potential cumulative effects suggests that the negative effects of exploitive (and presumed interactive) competition from pollock, Atka mackerel, and cod fishing are increased by additional effects from fisheries such as yellowfin sole, other flatfish, salmon, herring, rockfish, etc. This BiOp sets out some management measures for “parallel” state waters fisheries for cod and appears to suggest that additional steps for other state waters fisheries such as salmon and herring might be in order. The inclusion of rockfish, other flatfish, and yellowfin sole in this discussion, however, contradicts the “no jeopardy” findings for those fisheries made in the November 30<sup>th</sup> BiOp and is inconsistent with the scientific information presented in the November 30<sup>th</sup> BiOp as well. Here, NMFS cannot present a rationale. While flatfish species such as yellowfin sole and rocksole have been found in the diet of Steller sea lions, Steller sea lion scat data suggests that the importance of such species is minor compared to the three groundfish species that are the subject of the current BiOp. Likewise, rockfish species for which there are commercial fisheries within the waters inhabited by the western Steller sea lion population (west of Cape Suckling) occur predominantly in very deep water. Due to the relatively deep occurrence of these rockfish species, NMFS has up until now argued against the possibility of competition with fisheries because these rockfish species are not really available to Steller sea lion foraging. Additionally, data presented in the November 30<sup>th</sup> BiOp demonstrated that flatfish fisheries occur mostly outside of critical habitat for Western Steller sea lions. Given the absence of any new data to contradict the earlier findings, the suggestion that fisheries for rockfish and flatfish could be creating additional competition for Steller sea lions lacks scientific foundation.

**Recommendation:** This section should be revised to remove the flatfish and rockfish fisheries from the discussion of potential cumulative additional competition.

5. Section 4.4.3.2.2. Indirect effects on critical habitat for Steller sea lions (page 88).

This section asserts that all commercial fisheries create significant competition for sea lions throughout critical habitat, a gross overstatement of the Agency conclusions in Draft BiOp 4. As such, the discussion appears to throw out the opinion of this BiOp itself and even overstep the conclusions of the November 30<sup>th</sup> BiOp which limited the finding of jeopardy to pollock, cod, and Atka mackerel of the groundfish fisheries considered in that BiOp. Please consider the statement below taken from page 88 line 22:

“After considering all of the commercial fisheries that occur in the action area, especially in areas designated as critical habitat for sea lions, and comparing those fisheries against the various fish species consumed by Steller sea lions, we would conclude that commercial fisheries would reduce the availability of Steller sea lion prey in designated critical habitat. Given the magnitude of these harvests and their spatial and temporal extent, these removals could reduce the availability of prey in critical habitat for Steller sea lions sufficient to reduce the habitat’s value to the sea lion population.”

This statement and the entire section contradicts the findings of this BiOp and the November 30<sup>th</sup> BiOp wherein groundfish fishing operations for species other than pollock, cod, and Atka mackerel were found not to be a source of jeopardy or adverse habitat modification. But it also contradicts Draft BiOp 4 as well, in which fishing operations for pollock, cod, and Atka mackerel that occur beyond ten miles and that are otherwise subject to the seasonal apportionments and other measures included in the proposed management measures, are found not to be a source of jeopardy or adverse modification of critical habitat.

**Recommendation:** This section should be revised to be less sweeping in the scope of its conclusions. If the intent is to point out that beyond the three species

of interest for this BiOp, additional competition by some fisheries may occur, then the fisheries of concern should be listed specifically and the relative degree of concern by area or zone (e.g., inside ten miles and outside ten miles) should be elucidated. Like the section discussed in item 4 above, on face value, one could conclude from the section as currently drafted that flatfish, rockfish, sablefish, halibut, and other fisheries are implicated and that critical habitat areas beyond ten miles are just as important, from a sea lion management perspective, as the areas inside ten miles. This is not consistent with the analyses that have been prepared based on the most recent telemetry data or with the ultimate conclusions drawn from such data. This is not what the agency has been stating in all the public meetings it has conducted throughout the development of this and earlier BiOps.

#### **IX. OTHER AREAS OF CONCERN FOR THIS BIOP**

1. Section 5.3.2.8 Comparison of the proposed action to the management measures (FMP Biological Opinion) (Pages 127-136). In general, this section is well written and provides a very useful discussion of the qualitative model and the rankings assigned to different Steller sea lion recovery measures in the FMP Biological Opinion and Steller sea lions measures proposed in this BiOp. It also describes the simulation done to predict Steller sea lions population trajectories under the two proposals. The section is followed by a rather informative sensitivity analysis to evaluate the effects of the assumptions used for the modeling. While everyone would be interested in an improved degree of precision, what is presented employs the best available methods of analysis for the type of available data. On page 128, starting on line 41, the text discusses the need to revamp the population model to compare the November 30 BiOp to the current one. The heart of the matter is that the new proposed measures are based on levels of distance from Steller sea lions rookeries and haulouts with respect to the new sea lion location and foraging information from the new telemetry data. What is troubling about this portion of the section is that it implies that the simulation and the population model are inherently highly subjective and more so than the November 30<sup>th</sup> BiOp. Line 45 on page 128 states that “NMFS

notes that this method over the 8 year period for which the population was simulated added a good degree of subjectivity to the analysis that wasn't present in the analysis in the FMP biological opinion". The informed reader may understand that the complex distance from shore data stratifications (0-3 nm, 3-10 nm, 1020 nm, and beyond 20 nm) and other features of the proposed measures in this BiOp make the extrapolation more complex. But this should not be construed to mean that the analysis of the protection measures is inherently subjective or by any means arbitrary. In fact, this section of the document does a thorough and concise job explaining how the rankings were arrived at. Further, the methodology behind the assignment of points to different sets of measures is consistently applied.

**Recommendation:** While it is true that the analysis of the population trajectories comparing the FMP BiOp to the current BiOp is detailed and complex, the statement cited above should be modified so as to avoid implying that the population model or point assignments are highly subjective and hence possibly arbitrary.

2. Implications that the new proposed measures open up new fishing areas to the Atka mackerel fishery (page 125). Lines 27 through 34 on page 125 discuss the objective of slowing down the harvest rate within the two Aleutian Islands statistical areas where mackerel fishing will be allowed to continue inside Steller sea lions critical habitat. The discussion revolves around the institution of a "platoon" management system which is designed to randomly divide the fleet into two teams of approximately the same number of vessels and divide fishing effort between the two statistical areas to reduce catch rates on a daily basis within each statistical area. First of all, the text states that platoon management will apply to statistical areas 541 and 542, which is incorrect. The RPA committee recommendation does not allow fishing inside Steller sea lions critical habitat in area 541. In areas 542 and 543 where platoon management will be implemented, companies wishing to fish for the portion of the sub-area total allowable catch of Atka mackerel in critical habitat will have to participate in the platoon management system.

Another mischaracterization in this section is that the result of the platoon management system is that “a number of preferred fishing grounds were opened under this action that were previously closed” (page 125 lines 30-31). In fact, the platoon management system does not re-open preferred fishing areas compared to areas currently open or those that have been open since before the litigation on sea lions began. Platoon management serves to slow down the daily harvest rate. The RPA committee proposal also adjusts the amount of the allowable catch inside critical habitat to the proportion of the Atka mackerel biomass estimated to occur inside Steller sea lions critical habitat. This adjustment attempts to make harvesting proportional to the biomass distribution in order to better protect the mackerel stock from localized overfishing.

3. Discussion of degree to which different approaches to regulating fishing in critical habitat are risk adverse (Page 125). In discussing aspects of spatial dispersion of fisheries within critical habitat, the BiOp contrasts the degree of risk aversion of the current proposed management measures to an approach with groundfish harvests limited to the target exploitation rate theoretically applied to the seasonal proportion of the biomass in Steller sea lions critical habitat. While the statement (starting on page 125, lines 46) appears to simply state that the theoretical approach of “perfect proportionality” is preferred to the one used for this BiOp, the claim that the theoretically preferred approach is more risk averse than an applied approach is not really a legitimate comparison. Any theoretical approach will be superior to an applied approach when data governing the fundamental scientific relationships is less than perfect. But the agency and RPA committee had to develop an applied approach for Steller sea lions protections based on available groundfish and Steller sea lions location data. Every possible management approach would fall short of perfection under these conditions.

**Recommendation:** The analysis should avoid making comparisons of degrees of risk aversion between theoretical approaches and actual solutions that must be limited to real world data and logistical boundaries. For example, the approach used in the November 30<sup>th</sup> BiOp attempted to limit the amount of seasonal fishery

removals in proportion to the available biomass in portions of critical habitat. Data on the seasonal distribution of groundfish stocks was not available outside of the summer period when surveys have been conducted in the past. In addition, groundfish species migrate (particularly cod and pollock) and the amount of fish in a restricted catch area fluctuate significantly

The discussion of the relative degree of risk aversion of the current proposed management measures implies that they depart from a risk averse approach relative to the November 30 BiOp, when this is not necessarily the case. In fact, the zoning approach relied upon for the current proposed management measures keeps virtually all fishing with high catch rate gears and fleets away from areas where telemetry data suggests a high reliance by juvenile and pup Steller sea lions for foraging. That in itself may be more risk averse than the earlier proposed measures. The agency should take a critical look at what is written in this section and reconsider the comparisons that are discussed.

4. BiOp Should Contain a Summary Conclusion Section. The BiOp should include a summary conclusion which clearly pulls together old and new scientific data to justify its conclusion of no jeopardy. This information should include identification of the age and gender populations of most concern, new information on the foraging behavior of Steller sea lions, the changes discovered in nutritional stress, immature Steller sea lions foraging behavior, the successful foraging ability of adults in competition with fishing fleets in areas outside 10 miles, the accounting of sources of Steller sea lions mortality, Steller sea lions diet trends including scat data as well as prey ingestion data, as well as the data that led the majority of scientists in the "Is It Food? II Workshop" to reject of competition with fisheries as a current leading hypothesis for Steller sea lions decline. The BiOp should explain why NMFS now concludes that 1) It no longer ranks competition with fisheries as the leading hypothesis for the decline, 2) It is unable to link the decline or potential recovery to the commercial fishing fleet, 3) The management measures are a precautionary measure and 4) Even without a commercial fishery, and despite implementation of

any of the proposed alternatives, Steller sea lions would continue to decline because of environmental considerations and population trend dynamics.

5. Comparison Of Telemetry and Platform of Opportunity (POP) Data. In the series of BiOps (1-3) prior to the current draft, NMFS relied on a combination of POP data and telemetry data gathered prior to 1994 to assess the foraging ecology and habitat use of Steller sea lions.

Since 1994, the telemetry technology has improved significantly, as documented in the "white paper." The usable telemetry data set is several times larger than the earlier data. Additionally, the deployment of tags has focused on pups and juveniles, which are thought to be the demographic segment of the population of most concern. That data has now been analyzed and used in the development of the management measures analyzed in Draft BiOp 4 .

Telemetry tagging can be done in a systematic fashion, but the POP data was randomly generated on an opportunistic basis. As a result, POP data is heavily biased to the location of fishing boats with observers. Because large trawlers account for most of the observer coverage days, the best use of the POP dataset may be to define the range of where those vessels operated. It also reflects the regulatory structure under which the vessels operated. For a large portion of the last decade, trawlers were restricted from fishing near rookeries. Trawlers with the higher observer coverage levels also faced an array of other nearshore fishing restrictions for other management reasons including bycatch reduction and fish allocation(e.g. CVOA summer closure to catcher-processors, Bristol Bay pot sanctuary, chum salmon closure area, etc.). The larger vessels were also designed to fish offshore, and they do so as fishing conditions dictate. The combination of these factors effects the distribution of observations that make up the POP data set.

As a result of the distributional pattern of observations the data is downwardly biased against the nearshore areas of high importance to sea lions. Opportunistic sampling

in the POP data means they are heavily "pre-filtered." Older POP data, gathered prior to the decade of the 1990's, reflect a far different level of abundance of Steller sea lions at that time. Prior to the regime shift, when the population of Steller sea lions was at higher levels, one would expect an expanded range of area use. When the population contracts, with both fish and marine mammals, the range of a wild animal usually contracts to its core area of dependence.

In addition, the POP data does not distinguish whether the animals sighted were adults or juveniles, does not identify the sex of the animal, and cannot determine whether the same animal has been sighted several times by different vessels. To the extent that the recovery of the population is limited by juvenile survival and female reproductive success, and to the extent their distribution differs from that of adult males (a well documented phenomena for other marine mammals such as walrus), it is important to make such distinctions in the use of habitat.

NMFS and ADF&G representatives have stated to the RPA Committee and to the Council that the telemetry data represents the best available scientific data for understanding Steller sea lion foraging ecology. The analysis should clearly state the limitations of the POP data and the improvement in scientific information that has resulted from the collection of telemetry data.

6. Adaptive management measures incorporated in the proposed management measures.

As the agency is well aware, in the past industry participants have repeatedly requested that any further modifications to the groundfish fisheries to address potential interaction of fisheries and sea lion foraging should incorporate an adaptive management experiment. The purpose of such an experiment is to learn something about the effectiveness of the proposed modifications to the fishery and hopefully gain some scientific data and information on the general hypothesis of potential competition of groundfish fisheries and Steller sea lions. A valid experimental design should be incorporated into sea lion measures so that the effectiveness of the measures can be tested and information on validity of the competition hypothesis can



be obtained. We support the adaptive management measures incorporated into the proposed management measures, as well as the experimental programs that NMFS currently has under way in the sea lion arena. These efforts, and the \$40 million in new funds Congress provided this year to support Steller sea lion research, will hopefully lead to a better understanding of the degree (if any) to which there is a competitive interaction between sea lions and the fisheries that is negatively affecting sea lion populations in Alaska.

The RPA Committee process and marine mammal and fishery scientists on the committee have increased the depth of knowledge regarding the difficulty from a scientific perspective of a large-scale experiment to determine the effects of the groundfish fisheries. A subcommittee of the RPA Committee has been charged with the development of an adaptive management experiment to be incorporated into new measures once measures are in place. The subcommittee has found that the establishment of an adequate control area and the degree of restrictions that would have to be imposed to scientifically detect a difference in the open versus closed area is not a trivial matter. Furthermore, the intricacies of an experimental design that would attempt to control for environmental variables that affect sea lions and fisheries can not be underestimated.

For this reason, the MCA believes that NMFS' current approach makes the most sense. NMFS is in the process of conducting several small scale experiments to answer discrete scientific questions surrounding the overall sea lion/fisheries competition hypothesis. These projects include the Chiniak and Barnabas Gullies pollock depletion experiment conducted this year, the on-going Atka mackerel tagging experiment in the Aleutians, and the pilot winter survey and cod tagging work that were started this year. In addition, the proposed management measures incorporate a number of discreet area closures available to serve as control areas for future experiments. These areas are useful for the measurement of changes in sea lion populations that may or may not occur in adjacent areas that remain open to fishing. The closed areas include the Seguam foraging area in the eastern Aleutians

that would be closed to all fishing; the Bogoslof area (Area 9) that would be closed to all trawling; and areas 4, 10 and 11 in the Gulf of Alaska that would be subject to a variety of major fishery-related closures.

These smaller scale projects are more likely to increase scientific knowledge in the near term. Such smaller experiments are also necessary as pilot projects for a more global experiment in the future because they are critical to resolving basic scientific issues on how to measure effects and eliminate the confounding effects of changes in environmental variables. For this reason, the MCA agrees that the agency could not have incorporated any large scale adaptive management project into the Draft BiOp. Once some of these small scale projects are completed, the MCA will reconsider its request that NMFS design a large scale experiment to test the merits of the fisheries competition hypothesis.

#### **X. MSFCMA REQUIREMENTS IN ANALYZING MANAGEMENT MEASURES**

Fishery Management Plans (FMPs) and amendments to those plans must be consistent with a series of national standards specified in §301 of the Magnuson-Stevens Act (16 U.S.C. §1851). They must also comply with “other applicable law,” which includes the Endangered Species Act (ESA), the National Environmental Policy Act (NEPA), the Marine Mammal Protection Act (MMPA), the Administrative Procedure Act (APA), the Regulatory Flexibility Act (RFA) and various Executive Orders.

1. Endangered Species Act Requirements. Section 7(a)(2) of the ESA specifically prohibits federal agencies, including the National Marine Fisheries Service (NMFS), from authorizing actions which are “likely to jeopardize the continued existence of endangered species... or result in the destruction or adverse modification of their critical habitat” (the so called “jeopardy/adverse modification” test). If an agency contemplating the authorization of a proposed action (the “action agency”) determines that the action being contemplated may affect a listed species or its critical habitat, the action agency is required by the ESA and 50 C.F.R. §402.14 to initiate consultation with the U.S. Fish and Wildlife Service (FWS) or the National Marine Fisheries (NMFS), depending on which of the two Services has jurisdiction over the

species in question.<sup>1</sup> The purpose of the consultation process is to determine whether or not the proposed action is “likely to jeopardize” the endangered species or “adversely modify” its critical habitat. Once the formal consultation required by 50 CFR §402.12 is completed, the consulting Service is required to issue a Biological Opinion that determines whether or not the proposed action is likely to result in jeopardy or adverse modification. 50 C.F.R. §402.14(g)(8) provides that “in formulating its biological opinion,...the Service will use the best scientific and commercial data available and will give appropriate consideration to any beneficial actions taken by the Federal Agency...including any action taken prior to the initiation of consultation.”

If, following the formal consultation process specified in 50 C.F.R. §402.14, the consulting Service concludes that the proposed action is likely to result in “jeopardy” or “adverse modification,” the resulting Biological Opinion is supposed to include reasonable and prudent alternatives (RPAs) if there are any, that would alter or modify the proposed action so that it could pass the jeopardy/adverse modification test. On the other hand, if the Biological Opinion concludes that the proposed action is not likely to result in jeopardy or adverse modification, no RPAs are necessary and the action agency may proceed with the proposed action as originally contemplated.<sup>2</sup>

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<sup>1</sup> In the case of Steller sea lions (Steller sea lions), NMFS is both the action agency insofar as it is proposing to authorize groundfish fishing operations in the North Pacific; and the “consulting Service” insofar as it has ESA jurisdiction over Steller sea lions and certain other marine mammals.

<sup>2</sup> In such cases, where a no jeopardy/adverse modification determination is made, 50 C.F.R. §402.14(j) specifically authorizes the consulting service to suggest discretionary conservation measures for the action agency to consider, but such conservation recommendations are advisory in nature and are not “intended to carry any binding legal force” (see 50 C.F.R. §402.14(j)). Other than the requirement to avoid jeopardy and adverse modification of critical habitat, the ESA does not require the action agency to select an action alternative that has the least impact on the species in question - - only that the action selected does not “jeopardize the continued existence of the species or adversely modify its critical habitat”. Once that bar has been crossed, the agency is free to adopt a proposed measure even though there might be other alternative measures

This is the ESA process that has resulted in the issuance of BiOp 4. BiOp 4 has made a preliminary “no jeopardy/no adverse modification” finding with regard to the Council’s “preferred alternative,” and no RPAs have been proposed.

2. National Standards Test. In the case of a fishery management measure, the proposed action must not only pass the “no jeopardy/no adverse modification” test, it must also pass the “consistency with the national standards” test prescribed by the M-S Act. In a case such as this, where the agency is considering a number of competing management alternatives, all of which arguably meet the “no jeopardy/no adverse modification” test, each of the various alternatives must be evaluated in the context of the national standards. Thus, the Council and NMFS are required to evaluate the competing alternatives (Alternative Nos. 2-5 as identified in the draft SEIS that accompanies the BiOp) in terms of the following national standard issues:

- (1) Optimum Yield. Which alternative best prevents overfishing while achieving optimum yield from the fishery for the U.S. fishing industry?

- (2) Best Scientific Evidence Available. Which alternative is based on the best scientific information available?

- (3) Management of Individual and Interrelated Stocks of Fish. Which alternative best accomplishes the management of North Pacific stocks throughout their respective ranges?

- (4) Allocations of Fishing Privileges must Promote Conservation and Must be Fair and Equitable. Which of the sea lion-related alternatives succeed in promoting conservation (of fish, marine mammals and birds) while being fair and equitable to fishermen?

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that are arguably better for the endangered species in question (e.g. no fishing whatsoever).

(5) Efficient Use of Fish Resources. Which of the competing alternatives result(s) in the most efficient use of fishery resources?

(6) Variations Among and Contingencies in the Fisheries. Which of the alternatives best accounts for the differences in the various groundfish fisheries of the North Pacific, its fishery resources and catches?

(7) Minimization of Costs and Unnecessary Depletion. Which alternative minimizes the cost of prosecuting the pollock, cod and Atka mackerel fisheries and best avoids unnecessary duplication?

(8) Protection of Fishing Communities. Which of the alternatives best accommodates the dependence of fishing communities on the fishery resources of the North Pacific, ensures their continued participation in the fisheries for such resources and minimizes adverse economic impacts on such communities?

(9) Minimization of Bycatch. Which of the alternatives facilitates the prosecution of the fisheries with the lowest amount of bycatch?

(10) Safety of Life at Sea. Which alternative provides the greatest margin of safety for the fishermen, vessels and crews engaged in the North Pacific groundfish fisheries?

These are the considerations mandated by the M-S Act's national standards. Thus, each of the alternatives presently under consideration must not only meet the ESA's "no jeopardy/no adverse modification" test but each must be evaluated in terms of its

consistency with the goals and objectives specified in the ten national standards as well. A full discussion of the degree to which the various alternatives comply with the national standards can be found in the MCA's forthcoming comments on the Supplemental Environmental Impact Statement (SEIS) that NMFS has prepared in connection with the proposed action.

## **XI. OTHER ISSUES OF CONCERN**

### **Introduction**

Draft BiOp 4 provides a much more scientific treatment of the current level of scientific data as well as the reasoning used in determining whether the pollock, Atka mackerel and cod fisheries of the BSAI and GOA cause jeopardy to Steller sea lions or their critical habitat. While the Marine Conservation Alliance joins the SSC in welcoming this new approach there are still elements of speculation that detract from the scientific value of the document. We have tried to identify on a line-by-line basis where we think unsubstantiated statements or errors might have occurred. We have also included line-by-line identification of where tables, figures or statements occur in the draft BiOp that should be changed based on the new management measures imposed since the draft document was published.

1. Table 2.4; page 28. Include new management measures.
2. Sec. 4. Competition during the Winter Season; page 86, lines 20-26. Clearly define Winter and Summer season consistently throughout the document. The agency has said that the telemetry data winter season is defined as October through April. Delete or substantiate caloric value of winter prey made in this passage.
3. Sec. 4.4.3.2.3; Indirect Effects on critical habitat for Steller sea lions; page 88, lines 22-28. This section concludes that fisheries reduce the value of critical habitat because of a reduction in prey. These lines should be deleted or strong caveats included that clearly state that potential adverse impact may occur if no restrictions are imposed on nearshore areas.
4. Section 5.2.1.3; Telemetry Information; page 110, lines 36-38. These lines state that Steller sea lions spend a larger proportion of time on the surface in nearshore waters and so have a higher probability of being observed than offshore hits. Either delete or

substantiate with evidence that Steller sea lions spend more time on the surface in nearshore areas.

5. Same section; page 110, line 46. Explain why the telemetry data for sub adults and females without pups is less important than lactating females and weaned and non-
6. Table 5.1. Fields should be more clearly identified. A new field, including data for 0-10 miles should be added since its importance cannot be overstated in this document in assessing the value of proposed management measures.
7. Same section; page 115, lines 32 & 33. These lines point out relatively high percentage of pups beyond 20 nm in summer and relatively high number of adults during summer in table 5.1b. Because this is based on use of a formula that filters out 90% of nearshore telemetry hits, it should be noted here that this is the extreme outer bound of a highly risk averse analysis rather than reasonable or probable foraging occurrences. This caveat should be used wherever figures generated from Table 5.1b are generated in the document.
8. Same section, page 116, lines 3-6 and lines 18 & 23. These lines discuss agency concerns about additional gear closures inside critical habitat and seasonal splits that have been included in the new management measures since the draft BiOp was published and should be deleted. (This issue is discussed in more detail in "Issues of Concern" section of MCA comments.)
9. Same section, page 116, line 11. This line states that outside 0-10 miles, competition is less likely, "although impossible to quantify." This seems an inaccurate overstatement since we have excellent catch accounting and survey information in this area as well as increased telemetry data. It would be more accurate to say "although impossible to precisely quantify."
10. Table 5.2. Page 117. In field characterizing Temporal Dispersion, it discusses the different impacts of two and four seasons. For pollock and cod, there are three or four seasons in the BS and GOA. Discussion of two seasons is misleading. These numerous seasonal splits come at considerable cost to the fishing communities. Bullet three commenting on two and four seasons and its impact on localized depletion (largely unsubstantiated) should be deleted or appropriately corrected.

11. Section 5.3.1.3. Page 119, lines 19-22. These two sentences inaccurately characterize the winter period as a potential period of nutritional stress supposedly caused by a race for fish and the length of the pollock fishery has nearly doubled since AFA management measures went into place. The AFA has similarly impacted the conduct of the cod fishery. AFA sideboards and other regulatory actions have produced similar effects in the GOA. The Atka mackerel fleet has crafted a platoon system to slow down that fishery. The language should describe the importance reductions in daily catch effort
12. Table 5.3. Page 122. Update this table so that it reflects the additional management measures adopted after publication of the draft BiOp.
13. Section 5.3.2.1. Zone: 0-3. Page 123, lines 11 & 12. There is no substantiation for the stated conclusion that "NMFS considers fixed gear to be less likely to cause localized depletion." NMFS should not speculate.
14. Section 5.3.2.2. Zone 3-10. Page 123, lines 25-28. Same issue as immediately above.
15. Section 5.3.2.4. Zone: Spatial Dispersion (beyond 10 miles). Page 125. This section should be updated to reflect the additional management measures proposed.
16. Same section: Line 2 should be corrected to read capped at 28% of the annual TAC and seasonal limit is 70%. Line 3 should read that catcher-processors are *prohibited* rather than *restricted* from harvesting their sector share inside CVOA during B season.
17. Same section: Line 4 should read no pollock fishing in the 0-10 zone rather than 10-20 zone.
18. Same section: The two sentences in lines 4-8 should be eliminated. Specifically, the restriction that forces the fleet to fish 30% of the BS TAC outside the SCA during the period when highly valued and aggregated pollock are inside that area is neither "arbitrary" or "marginal" in impact. If that were true, we could continue to take close to 90% of A season fish in that area as we had done before imposition of RPAs.
19. Same section: The same misstatement applies to line 19.



20. Same section: The paragraph in lines 19- 25 should be written to reflect increased protection to critical nearshore areas rather than focus on fractions taken inside large, and often distant, areas of critical habitat.
21. Section 5.3.2.6 Zone: Temporal Dispersion beyond 10 nm. Page 126, lines 21-24. These sentences address the management measure cod seasonal splits before they were modified and should be corrected.
22. Same section, same page, line 25. Correct enumeration of BS pollock seasons from two to three.
23. Same section. Same page, lines 35-39. Eliminate this paragraph, which discusses concerns which have been adequately addresses since management measures have been modified. And again, the agency determination language on the ability of the described measures to avoid adverse impact should be consistent with earlier sections.
24. Section 5.3.2.7. Global Control of Fishing effort. The Draft BiOp should include the agency determination of effectiveness of this measure in avoiding adverse impacts to Steller sea lions.
25. Table 5.4. Update with additional management measures.
26. Same section. Page 129, lines 18-25. The trajectory numbers in this paragraph need to be changed after incorporating additional management measures imposed since publication of draft BiOp.
27. Table 5.6 and the description that follows on pages 130-134 need to be changed to incorporate additional management measures.
28. Figure 5.3 describing the Steller sea lion population model relative to compared management measures needs to be changed to reflect impact of additional management measures in BiOp 4 package. Again the wording "highly subjective" should be eliminated from the cutline for the reasons cited earlier on page 135, line 7.
29. Same section, page 135-136. This section should be rewritten to accurately reflect comparisons of old and new BiOp using additional management measures imposed since publication of draft BiOp.

30. Section 5.4.1.1. Step 2 of Jeopardy Analysis. Page 137. Lines 49 & 50 should be redrafted to better reflect new information regarding nutritional stress as described in appendix paper on "Is It Food?" Action by the agency is no longer to be based on assumption that nutritional stress is "likely," but rather, that it is not, and actions now are taken as "precautionary" measures to meet ESA criteria.
31. Same section. Page 139. Lines 28-30 read as follows: "Even if fishery related impacts to Steller sea lions were eliminated completely, we would expect the decline to continue as a result of environmental pressures that are also acting upon, and reducing, the survivability of this population." This conclusion is of such importance that it should be highlighted in the BiOp conclusion, especially since some have argued that the proposed action fails to cause immediate recovery while other proposed actions in the EIS would.
32. Same section. Page 140. Lines 8-10. Incorporate here the conclusion that even elimination of all fishing would cause continued, near term decline. And based on population trajectory model in Figure 5.3 decline is expected to end and recovery begin in approximately four years.
33. Same section. Page 140, lines 34 & 35. Correct this information on comparison of old and new management measures based on changes in BiOp 4 management measures.
34. Section 5.4.2.2 Discussion of the Effects on Steller sea lion critical habitat. Page 146, lines 26-28. Add clarification on varying degrees of importance to different zones of critical habitat, noting higher importance of nearshore critical habitat as described elsewhere in the document.

Figure 1. 1999 and 2000 INSHORE SECTOR EBS POLLOCK FISHERY

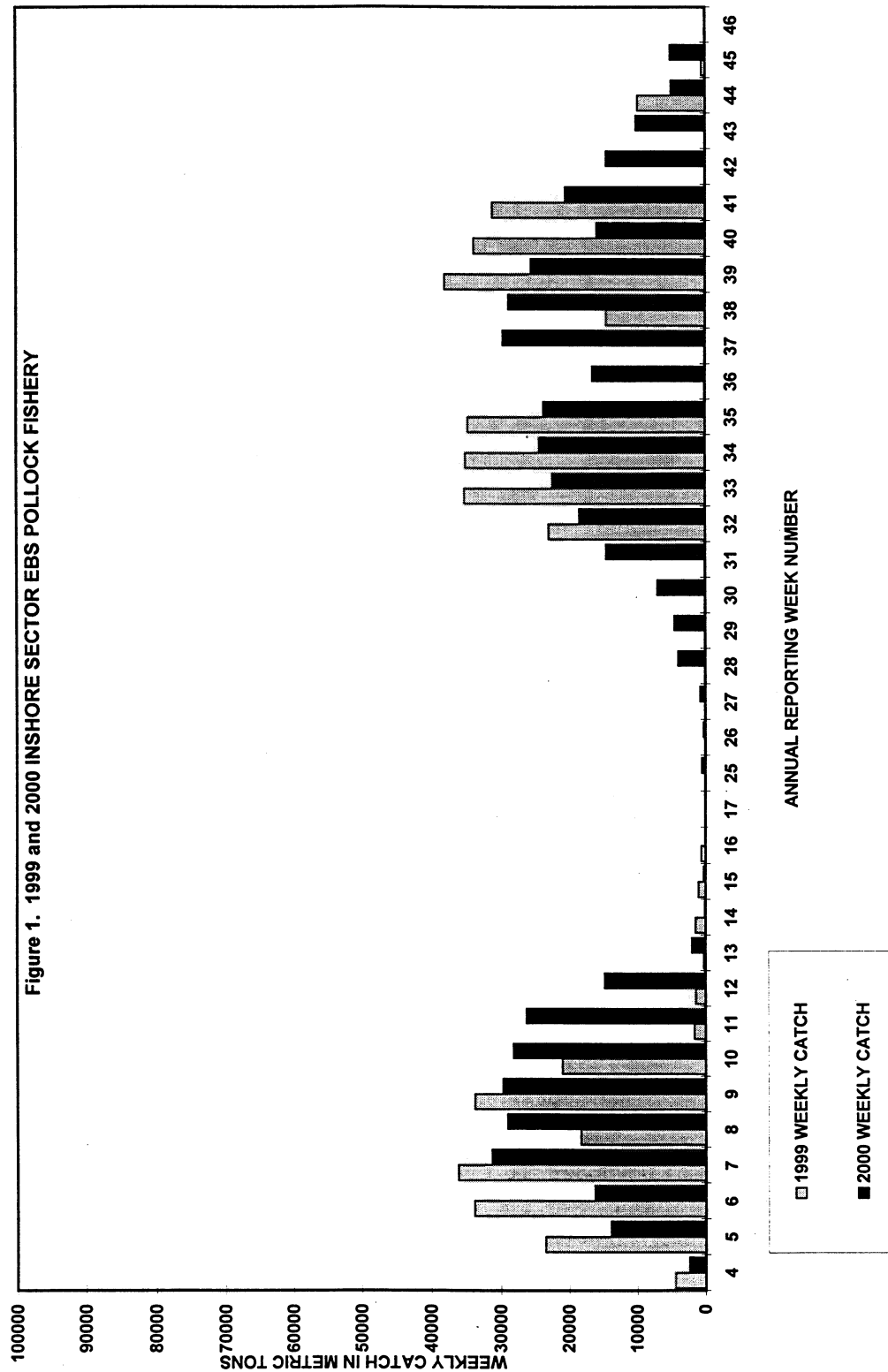
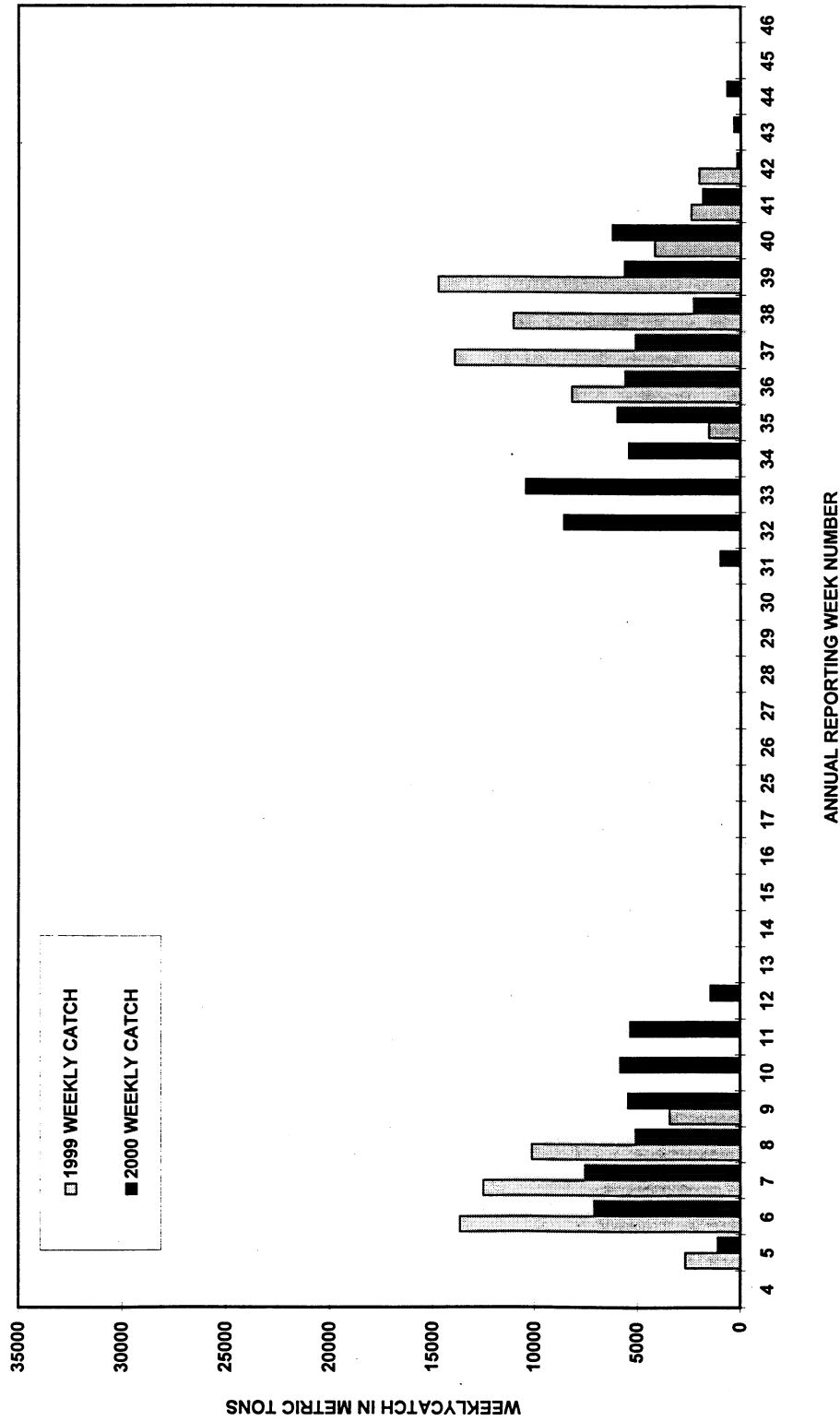


Figure 2. 1999 and 2000 MOTHERSHIP EBS POLLOCK FISHERY



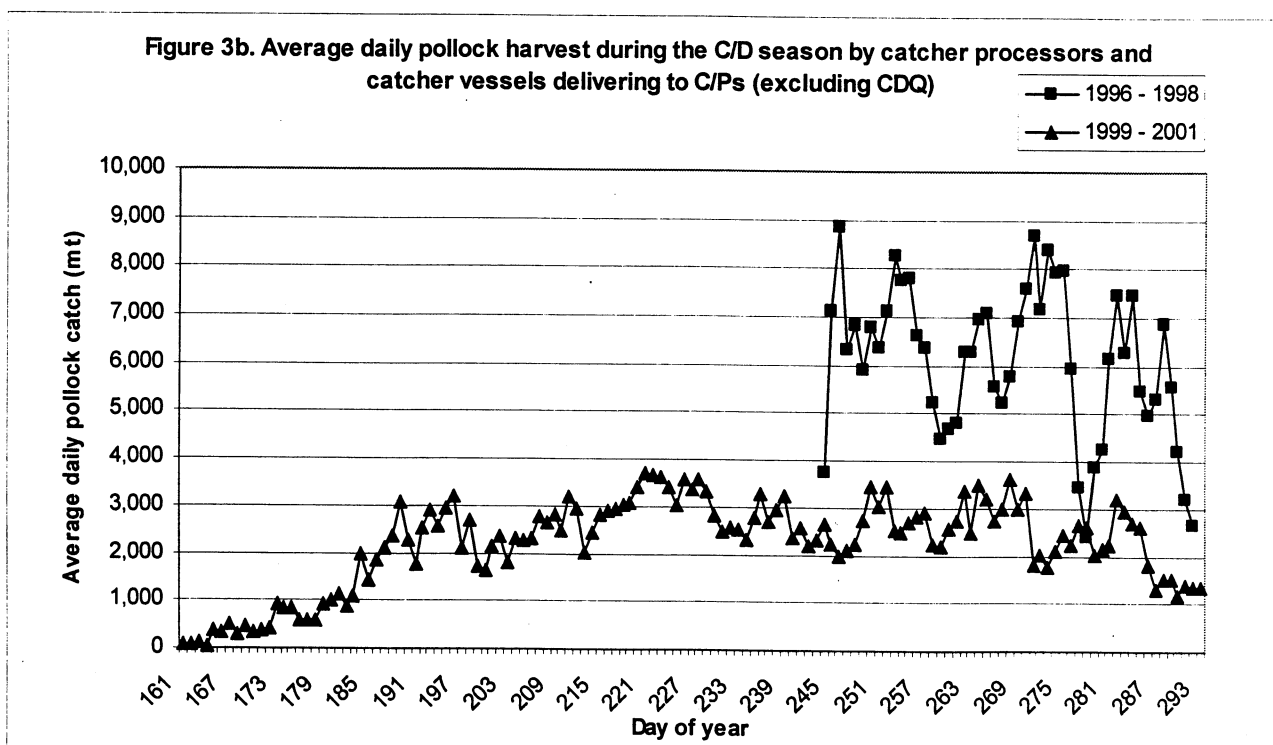
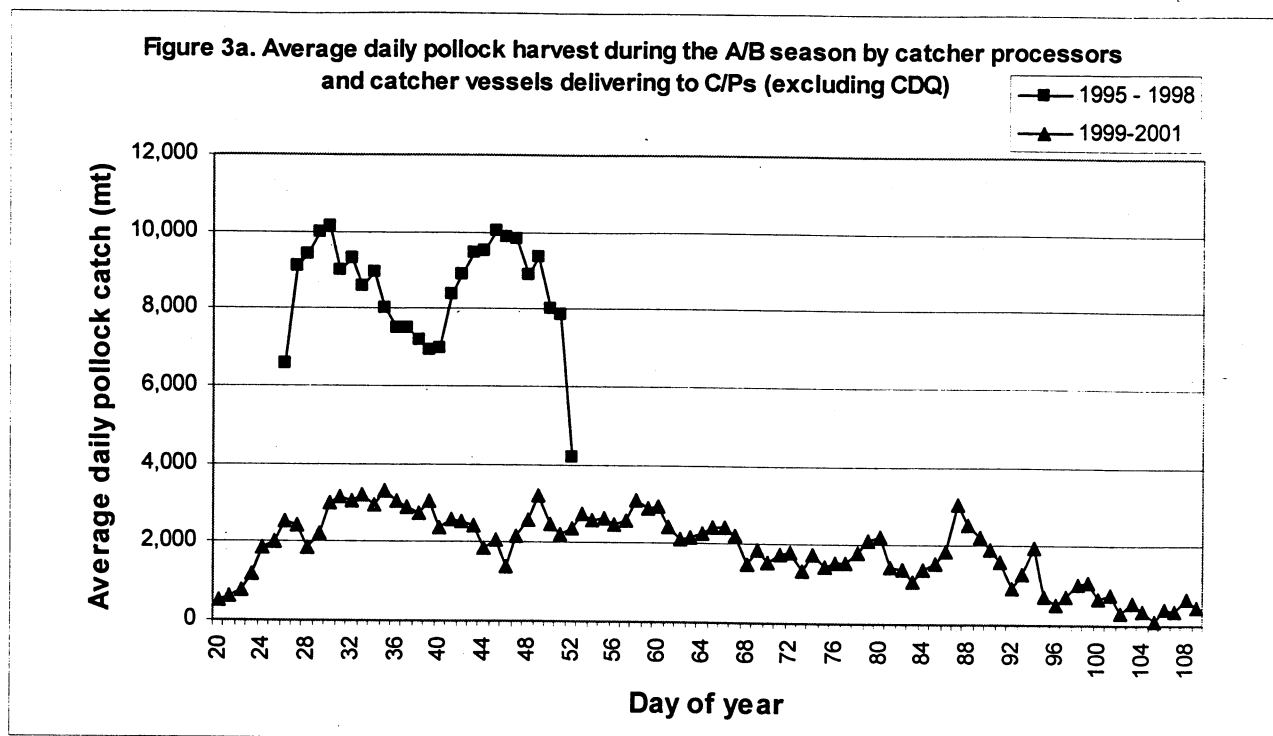
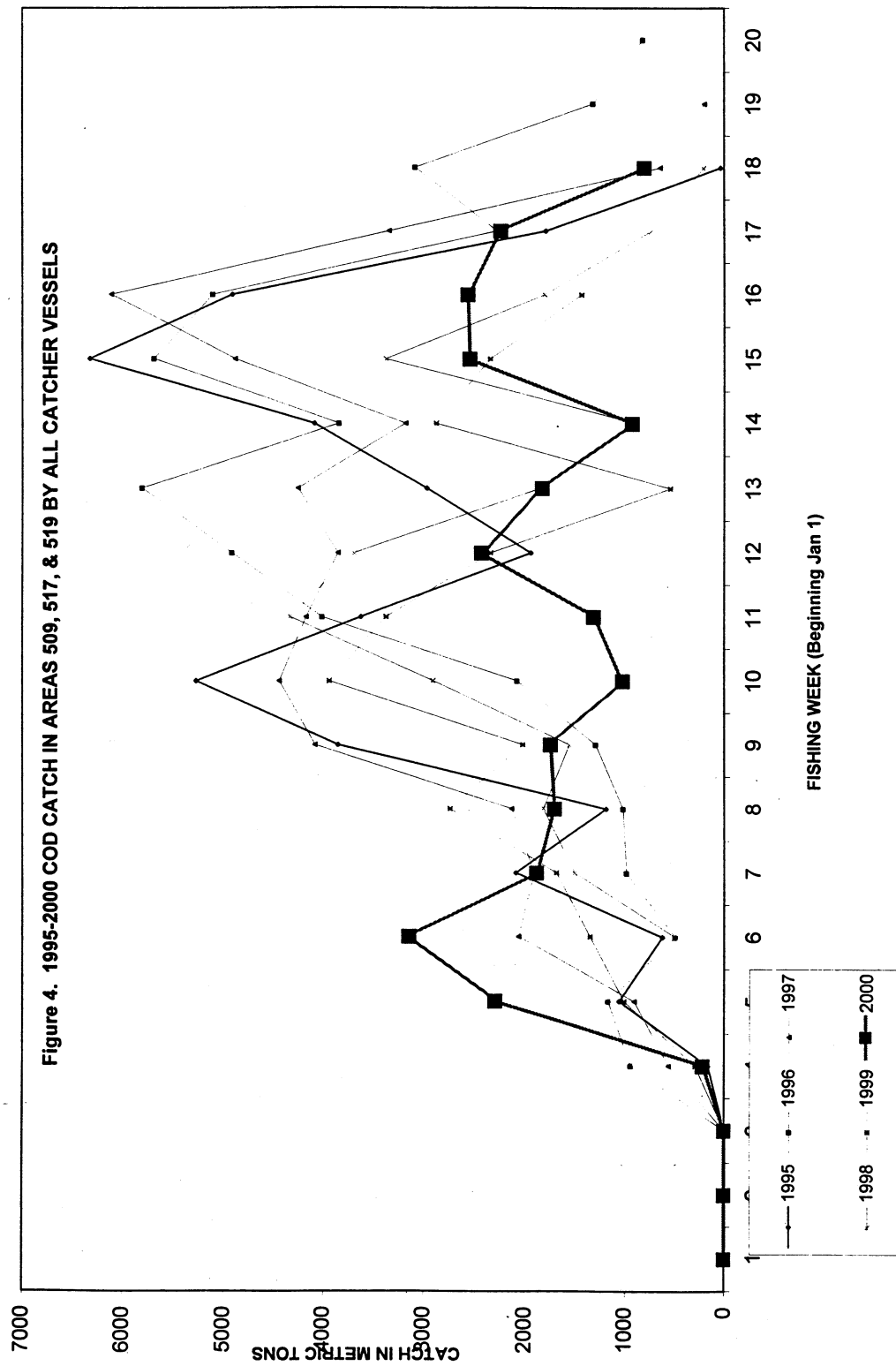


Figure 3. MCA comments on Biop 4

Figure 4. 1995-2000 COD CATCH IN AREAS 509, 517, & 519 BY ALL CATCHER VESSELS



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